### FOR IMMEDIATE RELEASE

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NOTE: This news release is a summary extract of content from the 2nd Quarter 2024 editions Foote Partners' 2024 IT Skills Demand and Pay Trends Report and 2024 IT Skills and Certification Pay Volatility Index, two market intelligence trend reports updated every 3 months from data contributed by HR departments at 4,391 U.S. and Canadian employers. It contains IT jobs, skills and certifications data trends published in the firm's IT Skills and Certifications Pay Index<sup>™</sup> and deep-dive supply/demand benchmark analysis from Foote Partners' research group.

Volatility in cash pay premiums for 1,340 IT skills and certifications reported in Foote Partners' *IT Skills and Certification Pay Index* spiked upwards to its highest level since 2016, with 31 percent (405 of 1,333) changing in market value in the first three months of 2024. Change in pay for certifications was responsible for much of this volatility rise, although noncertified skills pay volatility also contributed.

Average market value for 708 non-certified IT skills increased slightly in 1Q 2024, with 240 skills changing in value over these three months compared to 211 in the prior quarter. 130 lost value while 110 gained value in the first quarter compared to 115 and only 96, respectively, in the prior quarter. Three groups recorded gains: Apps Development Tools & Platforms and Data/Database.

For 632 IT certifications, average market value dropped by 1.3 percent overage in the first quarter, led by losses in Data/Database, Systems Administration/Engineering, Networking & Communications, and Architecture/Project Management/Process certification categories. 166 certifications changed value compared to only 133 in the prior quarter, with 60 gaining market value versus only 70 rising in 4Q 2023.

As new technology such as AI dramatically alters the tech labor landscape, workers are struggling to understand how their roles will change—if not go away altogether--now and in the future.

*April 21, 2024 – Vero Beach, FL.* Extra pay awarded by employers to talented tech professionals for **708 non-certified IT skills**---also known as cash pay premiums---increased slightly in the first quarter of 2024 after four consecutive quarterly declines in 2023. Despite lackluster performance last year in which average pay premiums declined one-half percent overall, the current average cash pay premium bonus for a single skill in Q1 is the equivalent of **9.6 percent of base salary**, well above the average for certifications.

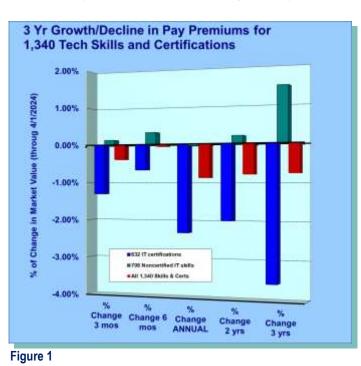
Average market value for 632 IT certifications decreased 1.3 percent in the first quarter of 2024 for the third time in the past four quarters. This is a continuation of a generally downward trend that began last April. The single bright spot in IT certification pay has been Info/Cybersecurity certifications which grew 0.5 percent in the quarter, the only categorical increases. The average cash pay premium bonus for a single certification in 1Q was the equivalent of 6.4 percent of base salary.

This according to the latest quarterly update of Foote Partners' *IT Skills and Certifications Pay Index™* (ITSCPI) based on compensation data provided by 4,391 private and public-sector employers in 83 U.S. and Canadian cities who partner with our firm to report pay for their 430,338 technology professionals in the U.S. and Canada.

Since its launch in 1999, the *IT Skills and Certifications Pay Index™* has continuously tracked cash premiums paid to tech professionals by their employers for an ever-increasing number of popular tech skills and certifications. Rigorously validated data and detailed market analyses are updated and published by Foote Partners every 90 days. Currently, premiums are reported for 1,340 certifications and non-certified skills.

"Short-term gains and losses in pay premiums for IT skills gives us more accurate insights into skills demand, tech workforce transition, and even business decision-making than any other data we collect from our more than 4,391 research partner employers," declares David Foote, chief analyst and research officer of Foote Partners. "This is why we began collecting and reporting skills pay data in the late 1990s. The pay volatility spikes our research uncovered in 2023 and in the first quarter of this year are a strong indication of employers struggling to come up with their own optimal staffing balances in the past year. For example, the deepening threat landscape and rapidly evolving high momentum technologies like A.I. are forcing organizations to move more quickly in filling specific gaps in their job architectures", continues Foote. "We are able to segment skills supply and demand into more than a hundred specializations, and to do it over very short timelines, something our salary surveys cannot do even though they are also updated every 3 months."

"Lately, employers have been investing heavily in A.I. tech in both salaried jobs and skills premiums. In the past year we were able to add seven new A.I. and machine learning job titles to the existing A.I. family in our *IT Professional Salary Survey* and twenty more A.I. related skills to the ITSCPI including: Convolutional Neural Network; Artificial Intelligence Model Optimization; Computer Vision; Stable Diffusion; AI Chatbot, Midjourney; ChatGPT; and Large Language Model/LLM tuning. These 47 critical core All skills will add, in total cash compensation, average cash pay premiums equivalent to between 7 percent to 21 percent of base salary. And 28 of them will add between 15 percent and 21 percent, well above the 9.6 percent average premium across all 632 noncertified skills we report. They are very hot right now," notes Foote. "In addition, there are 14 A.I. related certifications that are also growing in market value."



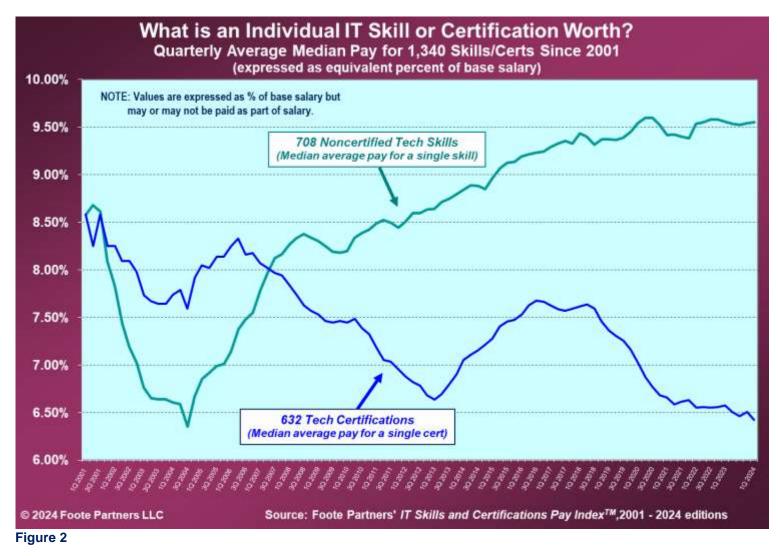
Certified vs. Noncertified Tech Skills (97,773 IT professionals, data through 4/1/2024)

Pay Performance, 3/12/24/24/36 months

Source: Foote Partners, *IT Skills and Certifications Pay Index™* (1Q2021 – 1Q2024 datasets)

# MULTI-YEAR PAY PREMIUM TRENDS: Certified versus Noncertified IT Skills

Average median cash pay premiums for a single certified or noncertified IT skill. N = 97,773 IT Professional



# IT Skills & Certifications Pay Data Trend Charts & Analysis

IT Skills and Certifications Pay Index<sup>™</sup> – 1st Quarter 2024 data edition\*

- Noncertified IT Skills (Page 6)
- IT Certifications (Page 19)

IT Skills and Certifications Pay Volatility Index<sup>™</sup> – 1st Quarter 2024 data edition\*

- Summary (Page 31)
- IT certifications (page 34)
- Non-certified IT skills (page 35)

\*All data collected through April 1, 2024

# How to interpret gains and losses in IT skills and certifications pay premiums

Quarterly gains and losses in premium pay reflect a widening or narrowing, respectively, in the gap between supply and demand for skills and certifications. This may occur for any number of reasons. For example, a quarterly decline in pay for a skill may signal that the market supply of talent for that skill is catching up to demand—not necessarily that demand is starting to wane. IT professionals are often attracted to a skill or certification if they perceive that it has rising value in the marketplace and therefore can help them to achieve higher pay, greater job security, a promotion, or more flexibility in their career choices. As they pursue greater competency in that skill or as more workers attain certification, supply increases and market pricing (which is elastic to the laws of supply and demand) will be driven downward unless demand is rising at the same proportional rate. Conversely, if demand rises and supply is not increasing to match that level of demand, pay premiums for specific skills and certifications will increase.

Therefore, when interpreting gains and losses in market pay it is important to consider all factors that could be driving supply and demand and market perception. Those factors range from:

- aggressive marketing of certifications by vendors;
- changes in certification programs (e.g., certification extensions or retirement);
- new technology and evolution/maturation of current technologies;
- technology adoption rate;
- product integration strategies,
- economic conditions;
- employment opportunities;
- mergers/acquisitions;
- budget cycles and the timing of skills and talent acquisition by employers;
- changes in labor sourcing plans pursuant to company strategies.

Foote Partners News Release – April 21, 2024

# Noncertified IT Skills Data Trend Charts & Analysis

(Data collected through April 1, 2024)

### 708 Non-Certified IT Skills Reported

# Foote Partners News Release – April 21, 2024

#### Apps Develop. Tools & Platforms

Agile software development Al Chatbot Amazon Kinesis Amazon SageMaker (ML) Amazon Web Services Apache Airflow Apache Ant Apache Camel Apache Cloudstack Apache Cordova Apache Flex Apache Hadoop Apache Lucene Apache Maven Apache Pig Apache Spark Apache Struts/Struts2 Apache Tomcat Apache Zookeeper Appium Automated Testing AWS CDK AWS CloudFormation AWS CloudFront/CloudFront Functions AWS CodeDeploy AWS Lambda Azure Stack Bamboo/BambooHR **Behavior-Driven Development** Bitbucket Boost C++ **Business Objects** С C# C++ C++ /CLI CA PPM (Clarity PPM) Cerner Millennium ChatGPT CircleCI Clojure Cloudera software Cloud Foundry PaaS COBOL Cognos Confluence Continuous Delivery Cucumber

Delphi Drupal Eclipse Elixir Epic Systems applications Erlang Ethereum F# Flutter Full Stack Development Generative AI Git/GitHub GitLab GitOps Go language (Golang) GoCD Gosu/Guidewire Gradle Groovy/Grails gRPC Grunt Hibernate/NHibernate HP ALM (App. Lifecycle Mgt) HP Unified Functional Testing Integration Testing iRise Jasmine Java JBehave Jenkins JIRA JUnit Kotlin MapReduce MATLAB Microsoft Azure Microsoft Azure Stack Microsoft Azure Logic Apps Microsoft PowerApps Microsoft Power Platform Microsoft SQL Server Mqt Studio Microsoft Team Foundation Server Midjourney Mokito **NetWeaver** Next.is NIM NUnit Objective-C

Datadog

Objective Caml (Ocaml) Octopus Deploy OpenShift **Oracle APEX Oracle Apps Developer Framework** Platform Engineering PL/SQL Powerbuilder Progress 4GL/Development tools R language RapidMiner **Red Hat Fuse** Rstudio Ruby Ruby on Rails Rust Saas SAS SAS Enterprise Guide Scala Scrum Selenium Semaphore CI/CD ServiceNow ITSM Sonatype Nexus SpecFlow SPSS SQL Stable Diffusion Swift Tcl TeamCity TestNG TransacT-SQL/tSQLt Travis CI UML (unified modeling language) Visual Basic 6.0 Visual C++ Vue.is VMware Cloud Foundry PaaS WebSphereMQ Xcode

### Web/e-Commerce Development

Active Server Pages ActiveX Adobe Analytics Adobe Experience Manager Ajax Amazon Cloudwatch AngularJS Apache Solr Apache Velocity Apache web server Apache Wicket Apex Code Backbone.is CGI Cold Fusion MX Content management systems CSS/CSS3 Cypress Django Docker /Docker Swarm Documentum Elasticsearch/Elastic Stack Ember.js Figma Front End Development GatsbvJS **Google Analytics** Google App Engine Google Cloud Platform Gradio GraphQL HTML5 JavaBeans/EJB 3.0 JavaFX JavaScript Java Server Pages JBoss/Wildfly Jetty Joomla! jQuery JSON Julia KnockoutJS Laravel PHP Magento/Adobe Commerce Magnolia Microsoft .NET Microsoft BizTalk Server Microsoft Blazor Microsoft Commerce Server Microsoft Identity Integration Server Microsoft Internet Information Services Microsoft Forefront Threat

Management Gateway (ISA) Microsoft Sharepoint/Sharepoint Server Microsoft Silverlight Microsoft Visual Studio Mobile applications development Mule/MuleESB Node.js Oracle Fusion Oracle WebLogic/ Oracle Workflow Pandas Perl PHP (all) PySpark Python React Redux REST RESTful SailPoint Scalable Vector Graphics (SVG) Secure coding/SW development Sitecore CMS SOAP/SOAP UI Social Media/Networks Spring Framework Spring Boot Spring Cloud Spring Integration Spring MVC Spring Security тівсо UDDI Umbraco VBScript Video/graphics editing Visual Interdev VoiceXML Web collaboration appliances Web Content Development Web Desian WebSphere WebSphere Datapower Wikis WSDL XAML/XACML XHTML MP XML (all variants

# 708 Non-Certified IT Skills Reported

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#### SAP & Enterprise Business

#### Applications

ABAP (all modules) Accelerated SAP (SLM) Baan (Infor LN ERP) Enterprise Application Integration IBM Sterling J.D. Edwards/Oracle Lawson Microsoft Dynamics/Dynamics 365 NetWeaver NetWeaver Portal (SAP EP) Oracle BPM Oracle CRM Oracle E-Business suite Oracle Eloqua Oracle ERP **Oracle Financials** Oracle HFM (Hyperion Fin. Mgt) Oracle HRMS Oracle NetSuite **Oracle Payables** Oracle Payroll Oracle Retail Oracle SCM Oracle SOA Suite Pega PeopleSoft (CRM/Financials/ HCM) Remedy ITSM Salesforce Salesforce Commerce Cloud Salesforce CRM Salesforce Sales Cloud Salesforce Service Cloud SAP AFS SAP ALE SAP APO SAP Ariba SAP Auto-ID infrastructure (SAP RF) SAP Basis Components SAP BI / SAP BW SAP BO Data Services SAP BODI SAP BOXI SAP BO Dashboard Design SAP BPC SAP BSP SAP Business One SAP ALE

SAP APO SAP Ariba SAP Auto-ID infrastructure SAP Basis Components SAP BI SAP BO Data Services SAP BODI SAP BOXI SAP BO Dashboard Design SAP BPC SAP BSP SAP Business One SAP Business Workflow/Webflow SAP CA SAP CAF SAP CAR SAP CCM SAP CE SAP CFM SAP CO SAP CO-PA SAP Commerce Cloud SAP CRM SAP Crystal Reports SAP CŚ SAP Digital Banking SAP EBP SAP EDI SAP EHS SAP EPM SAP ERP SAP ESA SAP Exchange Infrastructure (XI) SAP FI (Financial Accounting) SAP FI - CA SAP FI - CO SAP FI - FSCM SAP FI - Travel Management SAP Fiori SAP F&R (Forecasting/Replenish) SAP FS (Insurance) SAP GRC SAP GTS SAP HANA SAP HCM (SAP HR) SAP HCM ESS/MSS SAP HR-PA SAP HR-PY (Pavroll)

SAP Hybris/Commerce Cloud SAP IBP (Integrated Business Planning) SAP IS-U (Utilities) SAP ITS SAP MDM SAP MDX SAP MI SAP MII SAP MM SAP MRO SAP MRS SAP Netweaver Applications Server SAP Netweaver BW (BIW) SAP NetWeaver Visual Composer SAP NWDI SAP NWDS SAP Oil & Gas SAP PI (NetWeaver Process Integration) SAP PLM SAP PM SAP POSDM SAP PP SAP PS SAP PSCD SAP Public Sector Management SAP QM SAP for Retail SAP SAM (Service & Asset Mgt) SAP S/4HANA SAP SCM SAP SD SAP SD - GTS SAP Security SAP SEM SAP SM SAP Smart Forms SAP Solution Manager SAP SRM SAP TM SAP UI5 (UI development toolkit for HTML5) SAP Web Application Server SAP WEBI SAP WM SAP WM – EWM Siebel/Siebel Analytics

Software AG webMethods SuccessFactors Web Dynpro Workday HCM

#### Data/Database

Alteryx Designer Amazon Athena Amazon DvnamoDB Amazon RedShift Apache Cassandra Apache CouchDB Apache Hive Apache Ignite Apache Impala Apache Spark SQL Azure Cosmos DB Azure Data Factory Azure SQL Data Warehouse Alteryx Designer Amazon Athena Amazon DvnamoDB Amazon RedShift Apache Cassandra Apache CouchDB Apache Hive Apache Spark SQL Azure Cosmos DB Azure Data Factory Azure SQL Data Warehouse Azure SQL Database Azure Synapse Analytics Base SAS Big Data Blockchain Cloudera Impala Couchbase Server Data mining Data Vault Database management DB2 dBASE/xBASE ETL (Extract, transform, load) GIS Google BigQuery Google Data Studio Hbase Informatica

Java Database Connectivity Kibana Looker Master data management **Microsoft Access** Microsoft Exchange Server 2010/2013 Microsoft SQL Server 2019/2016/2014/2012 Microsoft SQL Server Integration Services Microsoft SQL Server Reporting Services (SSRS) MongoDB MySQL NewSQL NoSQL OpenEdge ABL Oracle Application Server Oracle Business Intelligence Enterprise Edition Plus Oracle Coherence Oracle DB 9i/10g/11i/12c Oracle Enterprise Manager Oracle Exadata Oracle Forms **Oracle Reports** PostareSQL Power Query Redis Riak Smart Contracts Snowflake/Snowflake Schema Saoop Sybase Adaptive Server Teradata TIBCO Spotfire Visual SQL

## 708 Non-Certified IT Skills Reported

### Foote Partners News Release – April 21, 2024

#### Systems/Networking

Active Directory Amazon AWS CloudTrail Amazon Elastic Kubernetes Service Ansible Apache Flume Arista ATM AWS Fargate Azure Active Directory Azure AKS **Azure Sentinel** Azure Storage Business continuity and disaster recovery planning CA Endevor Chef/Opscode Cisco ASA Cisco CUCM Cisco ICM Cisco IPCC Cisco ISE/Identity Services Engine Cisco Nexus Cisco Prime Cisco UCCE Cisco UCCX Citrix Hypervisor (XenServer) Citrix NetScaler Citrix Virtual Apps (XenApp) Cloud architecture Cloud security DHCP EIGRP Ethernet Fast Ethernet Gigabit Ethernet Google Kubernetes Grafana HP ConvergedSystem HP Quality Center HTTPS IaaS (Infrastructure as a Service) Infrastructure architecture Infrastructure as code(IaC) Intrusion prevention/detection sys IPX/SPX Juniper LAN

Microsoft Application Virtualization Microsoft Azure Sentinel Microsoft Hyper-V Microsoft SCCM Microsoft SCVMM Microsoft Virtual Server Mobile device management Mobile security Multiprotocol Label Switching NAS/Network Attached Storage Network access control/Identity mgt svstems Network security management NGFW(next-generation firewall) Novell Netware PaaS Performance Analysis/Tuning Performance Management/Metrics Performance Testing Prometheus Puppet Rackspace Cloud RedHat OpenShift Routing (e.g. OSPF, RIP, IGRP) Salt SAN/Storage Area Networks Security skills (project-based) Security Information and Event Management SMTP SNA Software-Defined Networking SolarWinds Orion Storage Virtualization/Admin TCP/IP Terraform Tivoli Vagrant vCenter Server vCloud Virtualization (various) Virtual security VMware ESXi Server VMware NSX VoIP/IP telephony VPN/OpenVPN WAN/3G/4G services Web Infrastructure Web services security Wireless Network Mamnt

Wireless security Wireless sensors/RFID Wireline Networking/ Telecomm. WML

#### **Operating Systems**

AIX Fedora CoreOS HP-UX Linux Mac OS X Mobile operating systems (iOS, Android) OpenStack Red Hat Enterprise Linux Solaris SUSE Unix (all) VMware vSphere Windows 10/11 Windows NT Windows Server 2019/2016/ 2012 Management, Methodologies and Process Artificial Intelligence Artificial Intelligence for IT **Operations** Artificial Intelligence Model Optimization AWS Codebuild AWS DevOps Azure DevOps Azure Key Vault Azure Machine Learning Azure Monitor Azure OpenAl Azure Service Fabric Big Data Analytics Bioinformatics **Business Analysis Business Analytics** Business Intelligence

Business performance mgt

Change management

Caffe

COBIT

Business process management/

Capacity Planning/Management

modeling/improvement

**Configuration Management** Continuous Improvement Continuous Integration/Continuous Deliverv Convolutional Neural Network CRM Cryptography (encryption, VPN) Customer Experience Cyber Threat Intelligence Cybersecurity Data Acquisition and Control Systems Data Analytics Data Architecture Data Cleansing Data Engineering Data Governance **Data Integration** Data Management Data Migration Data Modelling Data Privacy Data Protection Data Quality Data Science Data Security Data Strategy Data Transformation Data Visualization DataOps DataRobot Enterprise AI Platform Deep Learning Deployment Automation DevOps DevSecOps Digital Analytics Digital Forensics Digital Marketing E-Discoverv E-Procurement ERP **Event-Driven Architecture** FinOps Flink ForaeRock Functional Programming

Collaboration software

Correlation

Computer Vision

Complex Event Processing/Event

Functional Testing Game Development/Gamification General Data Protection Regulation Google TensorFlow Governance, Risk management and Compliance H2O.ai HI 7 Hyperautomation Identity access management Incident Management Information management IT Audit IT Governance ITIL V3 IT Service Management/ITSM Kanban Keras Large Language Model/LLM tuning Machine Learning Marketo Metadata design and development Microservices Microsoft SQL Server Analysis Services Microsoft Visio MLOps Model Tunina Natural language processing Network Architecture Neural Networks NIST/NIST 800 **Object Detection/YOLO** Penetration testing Power BI Predictive Analytics and Modeling **Prescriptive Analytics** Program Management Project management/governance Prompt Engineering PyTorch QlikSense Quality Assurance/QA Automation Quality management/TQM Quantitative Analysis/Regression Razor Requirements Engineering/Analysis

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# 708 Non-Certified IT Skills Reported

### Foote Partners News Release – April 21, 2024

#### <u>Management, Methodologies and</u> <u>Process</u> – cont'd.

Risk analytics/assessment Robotic Process Automation Scaled Agile Framework (SAFe) Security architecture and models Security auditing Security management Security testing SEO Site Reliability Engineering Six Sigma/Lean Six Sigma Social media analysis/analytics Software development lifecycle management Splunk . Tableau **Test Automation** Test Driven Development/ Scripting Threat Detection/Modelling/Mgt TIBCO BusinessWorks TOGAF Unit Testing Usability Research/Human Factors Research User Acceptance Testing User Experience/User Interface User-Centered Design Vulnerability Scanning/ Assessment/Management Waterfall Web Analytics Webtrends analytics Zachman Framework

#### Messaging & Communications ActiveMQ

ActiveMQ Apache Camel Apache Kafka HCL Domino Java Messaging Service Message-oriented Middleware (Wave, XMPP/Jabber, etc.) Microsoft Exchange Novell Groupwise Oracle Comm Messaging Server RabbitMQ TIBCO Enterprise Message Service TIBCO Rendezvous Unified Communications/ Messaging

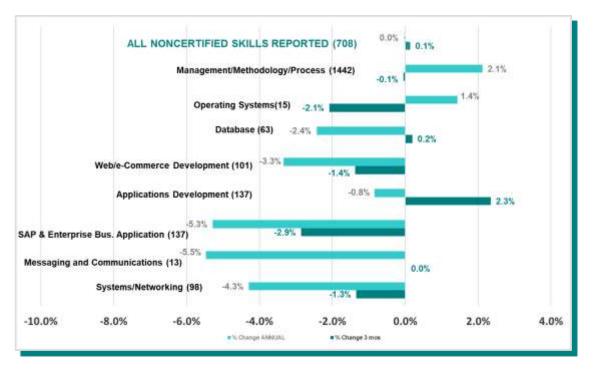
### Foote Partners News Release – April 21, 2024

# IT NONCERTIFIED SKILLS PAY SUMMARY – Through April 1, 2024

# A. NONCERTIFIED TECH SKILLS PAY PERFORMANCE: By Category

**NON-CERTIFIED TECH SKILLS.** 240 of 704 **non-certified tech skills** changed cash market value from January 1, 2024 to April 1, 2024 compared to 211 of 694 skills in the prior calendar quarter. The average **c**ash pay premium increased slightly in the first quarter of 2024 following consecutive declines in the prior four quarters.

# Noncertified IT Skills - % Growth/Decline 3 months & 12 months



(708 skills, data through 4/1/2024)

Figure 3

Source: Foote Partners <u>IT Skills & Certifications Pay Index<sup>TM</sup></u>, 1<sup>st</sup> Quarter 2024 data

# Foote Partners News Release – April 21, 2024

# 4-YEAR NON-CERTIFIED IT SKILLS PAY TRENDS

(Through 4/1/2024 - 97,733 IT Professionals)

# 17-YEAR NON-CERTIFIED IT SKILLS PAY TRENDS BY CATEGORY

% Change in Average Median Pay for a Single Non-certified IT Skill)

(Through 4/1/2024 – 97,733 IT Professionals)

SOURCE: Foote Partners 2024 IT Skills & Certifications Pay Index<sup>TM</sup>

NONCERTIFIED IT SKILLS CATEGORIES		Change in Average Premium Pay by Category						
	# of skills surveyed	% Change 3 mos	% Change 6 mos	% Change ANNUAL	% Change 2 yrs	% Change 3 yrs	% Change 4 yrs	
Systems/Networking	98	-1.3%	-2.2%	-4.3%	-5.8%	-9.8%	-12.5%	
Messaging and Communications	13	0.0%	-2.8%	-5.5%	-1.4%	-18.9%	-28.0%	
SAP & Enterprise Business Applications	137	-2.9%	-3.0%	-5.3%	-8.4%	-13.2%	-25.2%	
Apps Development Tools & Platforms	137	2.3%	1.5%	-0.8%	-1.9%	-3.6%	-0.2%	
Web/e-Commerce Development	101	-1.4%	-3.1%	-3.3%	-7.8%	-6.5%	-13.0%	
Data/Database	63	0.2%	0.8%	-2.4%	-4.4%	-2.9%	-1.3%	
Operating Systems	15	-2.1%	-1.4%	1.4%	1.4%	3.7%	7.6%	
Management/Methodology/Process	144	-0.1%	0.6%	2.1%	7.0%	11.6%	13.4%	
ALL NONCERTIFIED SKILLS REPORTED	708	0.1%	0.3%	0.0%	0.2%	1.5%	0.1%	

# Noncertified IT Skills Premium Pay - by Category, Last 21 years

(Values expressed as equivalent of % of base salary)



Pay data supporting these charts available in the <u>IT Skills and Certifications Pay Index<sup>TM</sup></u> – 1Q 2024 data edition

# HIGHEST PAYING Non-certified IT Skills (cash pay premiums, all 708 skills surveyed, ranked)

These non-certified IT skills are among those earning the highest pay premiums (data collected January 1, 2024 to April 1, 2024). Shown in alphabetical order by <u>overall market</u> value rank in descending order including ties. Green/Red = increased/decreased in market value this quarter. Purple = Made the list this quarter for first time.

1 Operate the set Newsel Network	Come Development/Comification	6 [Tiel] //ulaerability Coopping/Accordment/	Azure Machine Learning
1. Convolutional Neural Network	Game Development/Gamification gRPC	6.[Tie] Vulnerability Scanning/Assessment/ Management	Azure OpenAl
MLOps	Identity access management	Al Chatbot	
Risk analytics/assessment	Informatica		Big Data
		Apache Hive	Business analysis
2.[Tie] Amazon Athena	Machine Learning	Apache Impala	Business analytics
DevSecOps	Metadata design and	AWS Codebuild	Business process
Flink	development	Azure Key Vault	mapping/modeling/improvement
Neural Networks	Microservices	Cloudera software	Caffe
Site Reliability Engineering	Prescriptive Analytics	Complex Event Processing/Event Correleation	Capacity Planning/Management
	Prompt Engineering	Continuous Integration/Continuous Delivery	Clojure
3.[Tie] Apache Ignite	Scaled Agile Framework (SAFe)	Cybersecurity	Computer Vision
Apache Zookeeper	Security architecture and models	Data Management	Configuration Management
AWS DevOps	Smart Contracts	Data Modelling	Cyber Threat Intelligence
Data Architecture	Threat	Data Quality	Data Analytics
Data Governance	Detection/Modelling/Management	Go language (Golang)	Data Migration
Data Strategy	Zachman Framework	Governance, Risk management and	Data Security
DataOps		Compliance	Data Visualization
Deep Learning	5.[Tie] Amazon RedShift	Hyperautomation	ForgeRock/Ping Identity
Event-Drive Architecture	Apache Cassandra	IT Audit	Generative Al
Large Language Model/LLM tuning	Azure Service Fabric	Kanban	Hbase
Natural language processing	Bioinformatics	Kibana	Kotlin
	COBIT	Master data management	Microsoft SQL Server Analysis Services
4.[Tie] Apache Airflow	Data Privacy	Object Detection/YOLO	Network Architecture
Artificial Intelligence	Data Transformation	Penetration testing	Oracle Exadata
Artificial Intelligence for IT Operations	Data Vault	Requirements Engineering/Analysis	Predictive Analytics and Modeling
(AIOps)	Deployment Automation	Six Sigma/Lean Six Sigma	Program Management
Artificial Intelligence Model	DevOps	Teradata	Quality Assurance/QA automation
Optimization	E-Discovery	Test automation	Rust
Blockchain	Google TensorFlow		Security management
Cryptography (encryption, VPN,	H2O.ai	6.[Tie] Amazon DynamoDB	Snowflake/Snowflake Schema
SSL/TLS, Hybrids)	HL7	Amazon SageMaker (ML)	Software development lifecycle
Data Engineering	Marketo	Apache CouchDB	management
Data Integration	NIST/NIST 800	Apache Spark	Stable Diffusion
Data Science	PyTorch	Azure DevOps	Unit Testing
Ethereum	Security testing		Usability Research/Human Factors
FinOps	Splunk		Research
Functional Programming	Test Driven	SOURCE: Foote Partners IT Skills & Certifications	Pay Index™ 10 2024 data edition
	Development/Scripting	COURCE. FOR FURING TO MILE & COURCEMENT	, re zez rada oditori

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# NON-CERTIFIED TECH SKILLS TREND HIGHLIGHTS: Market Value Gainers & Highest Pay – 1st Quarter 2024 data

These non-certified tech skills gained 10% or more in market value in the three months ending April 1, 2024 vs. prior quarter (seen below grouped by segment). Listed in alphabetical order within each group. Highest paying skills listed on right in alphabetical order.

IT SKILLS (non-certified)			Highest Paying – (A-Z)	
Applications Development skills Al Chatbot Amazon SageMaker (ML) Apache Ant Apache Cordova Apache Pig Boost C++ Cloudera software COBOL Datadog Delphi Drupal Erlang Ethereum F# Go language Gosu/Guidewire JBehave Mokito SAS SpecFlow SPSS Tcl TestNG SAP & Enterprise Business Applications skills Oracle HRMS Oracle Retail Oracle Retail	Web/SOA/E-Commerce skills         Adobe Experience Manager         Apex Code         Backbone.js         Documentum         JBoss /WildFly         Julia         Magnolia         Microsoft Silverlight         Pandas         Sitecore CMS         Spring Cloud         Spring MVC         TIBCO         Database Skills         Amazon Athena         Amazon RedShift         Apache Ignite         Hbase         Oracle Exadata         Sqoop         Teradata         Messaging & Communications         Skills         Apache Pulsar         TIBCO Rendezvous	Systems/Networking skillsActive DirectoryAmazon Elastic Kubernetes Service (AmazonEKS)AristaAWS FargateAzure AKSGoogle KubernetesGrafanaMicrosoft SCVMMMultiprotocol Label Switching (MPLS)vCloudWireless sensors/RFIDManagement, Process & Methodology skillsBioinformaticsData GovernanceGame Development/GamificationHL7MLOpsNatural language processingPrompt Engineering/AnalysisThreat Detection/Modelling/ManagementVulnerability Scanning/Assessment/ ManagementWebtrends analyticsZachman Framework	<ul> <li>Amazon Athena</li> <li>Apache Airflow</li> <li>Apache Ignite</li> <li>Apache Zookeeper</li> <li>Artificial Intelligence for IT Operations (AIOps)</li> <li>Artificial Intelligence Model Optimization</li> <li>AWS DevOps</li> <li>Blockchain</li> <li>Convolutional Neural Network</li> <li>Cryptography (encryption, VPN, SSL/TLS, Hybrids)</li> <li>Data Architecture</li> <li>Data Governance</li> <li>Data Integration</li> <li>Data Science</li> <li>Data Strategy</li> <li>DataOps</li> <li>Deep Learning</li> <li>DevSecOps</li> <li>Ethereum</li> <li>Event-Drive Architecture</li> <li>FinOps</li> <li>Flink</li> <li>Functional Programming</li> <li>Gamification</li> </ul>	<ul> <li>-Large Language Model/LLM tuning</li> <li>-Machine Learning</li> <li>-Metadata design and development</li> <li>-Microservices</li> <li>-MLOps</li> <li>-Natural language processing</li> <li>-Neural Networks</li> <li>-Prescriptive Analytics</li> <li>-Prompt Engineering</li> <li>-Risk analytics/assessment</li> <li>-Scaled Agile Framework</li> <li>- Security architecture and models</li> <li>-Site Reliability Engineering</li> <li>-Smart Contracts</li> <li>-Threat Detection/Modelling/ Management</li> <li>-Zachman Framework</li> </ul>
SAP Basis Components SAP GTS SAP SRM Workday HC	Fedora CoreOS OpenStack Windows Server 2019/2016/2012	SOURCE: Foote Partners <u>IT Skills &amp;</u> Certifications Pay Index <sup>™</sup> , 1Q 2024 data edition	- gRPC - Identity access management - Informatica	

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# NON-CERTIFIED IT SKILLS TREND HIGHLIGHTS: Market Value Losers – 1st Quarter 2024 data

These non-certified IT skills declined 10% or more in market value in the three months ending April 1, 2024 vs. prior quarter (seen below grouped by segment). Listed in alphabetical order within each group.

# **TECH SKILLS (Non-certified)**

### Applications Development skills

Apache Cloudstack Appium Behavior-Driven Development Bitbucket BusinessObjects ChatGPT Cloud Foundry PaaS Grunt Oracle APEX Travis CI Visual Basic 6.0

### Data/Database

Apache Cassandra Apache Spark SQL ETL (Extract, transform, load) Google BigQuery Google Data Studio Java Database Connectivity (JDBC) Looker Microsoft Exchange Server 2010/2013 NewSQL Oracle Business Intelligence Enterprise Edition Plus

# Messaging & Communications Skills

Unified communications/messaging RabbitMQ SAP & Enterprise Business App skills ABAP Oracle E-Business suite Oracle Elogua Oracle SOA Suite Salesforce Commerce Cloud Salesforce Service Cloud SAP ALE (Application Link Enabling) SAP APO (Advanced Planner & Optimizer) SAP Business One SAP CAR (Customer Activity Repository) SAP Commerce Cloud SAP Crystal Reports SAP Data Services (SAP BODS) SAP ERP Operations (multi-skills) SAP for Retail (IS-Retail) SAP HCM (SAP HR) SAP HCM ESS/MSS SAP Hybris SAP Oil & Gas SAP Security SAP WM (Warehouse Management) Siebel/Siebel Analytics Web Dynpro

### **Operating Systems skills**

AIX Mobile operating systems (iOS, Android, etc.) SUSE

### Systems/Networking skills

Ansible Cisco CUCM Cisco ISE (Identity Services Engine) Cisco UCCX Citrix Virtual Apps (XenApp) Cloud architecture HP Quality Center HTTPS Microsoft SCCM Mobile device management Performance management/metrics Rackspace Cloud Routing (e.g. OSPF, RIP, IGRP) SolarWinds Orion Virtualization (various) VPN/OpenVPN Web services security

### Management, Process & Methodology

skills Azure Key Vault Big Data analytics Data Protection Digital Forensics Hyperautomation QlikSense Robotic Process Automation Social media analysis/analytics User Experience/User Interface Web Analytics

Web/E-commerce Development skills Docker/Docker Swarm Ember.js Figma Java Server Pages JavaBeans/EJB 3.0 Jettv Joomla! iQuery JSON Magento/Adobe Commerce Microsoft Forefront Threat Management Gateway (formerly ISA) Microsoft Identity Integration Server (MIIS) Microsoft Visual Studio Node.is Scalable Vector Graphics (SVG) Social Media/Networks Spring Integration Video/graphics editing Web Design

SOURCE: Foote Partners IT Skills & Certifications Pay Index™, 1Q 2024 data edition

# NON-CERTIFIED IT SKILLS ANALYSIS – Winners

# A. NON-CERTIFIED TECH SKILLS EARNING HIGH PAY---AND STILL GROWING IN VALUE

The following non-certified tech skills meet two prerequisites:

- They earned workers cash pay premiums well above the average of all 708 skills reported in our IT Skills and Certifications Pay Index<sup>™</sup> in guarter ending April 1, 2024.
- They recorded gains in cash market value in the six months ending April 1, 2024.

No skill below is earning less than the equivalent of 16 percent of base salary—significant considering the average for all skills reported is 9.6 percent of base—and are listed in descending ranked order of cash premium and market value increases (including ties). Not surprising, the list contains a number of security, coding, database, analytics and artificial intelligence related skills.

Here is the list of noncertified IT skills pay premiums meeting the above criteria (in alphabetical order):

Below is the same list, but in descending ranked order of cash premium first and market value increase second (including ties).

### 1. MLOps

Average Pay Premium: 21 percent of base salary equivalent Market Value Increase: 10.5 percent (in the six months through April 1, 2024)

### 2. Convolutional Neural Network

**Risk analytics/assessment** 

Average Pay Premium: 21 percent of base salary equivalent Market Value Increase: 5 percent (in the six months through April 1, 2024)

### 4. Amazon Athena

Average Pay Premium: 20 percent of base salary equivalent Market Value Increase: 25 percent (in the six months through April 1, 2024)

### 5. Apache Flink

Average Pay Premium: 20 percent of base salary equivalent Market Value Increase: 17.6 percent (in the six months through April 1, 2024)

### 6. Neural Networks

Average Pay Premium: 20 percent of base salary equivalent Market Value Increase: 5.3 percent (in the six months through April 1, 2024)

# NON-CERTIFIED IT SKILLS ANALYSIS – Winners, cont'd.

### 7. Apache Ignite

Data Governance Average Pay Premium: 19 percent of base salary equivalent Market Value Increase: 18.6 percent (in the six months through April 1, 2024)

### 9. AWS DevOps

Data Strategy Deep Learning Large Language Model/LLM tuning Natural Language Processing Average Pay Premium: 19 percent of base salary equivalent Market Value Increase: 5.6 percent (in the six months through April 1, 2024)

### 14. Gamification

### Prompt Engineering

Average Pay Premium: 18 percent of base salary equivalent Market Value Increase: 28.6 percent (in the six months through April 1, 2024)

### 16. gRPC

# Metadata design and development

Average Pay Premium: 18 percent of base salary equivalent Market Value Increase: 20 percent (in the six months through April 1, 2024)

### 18. Informatica

Average Pay Premium: 18 percent of base salary equivalent Market Value Increase: 12.5 percent (in the six months through April 1, 2024)

### 19. Apache Airflow

Data Integration Data Science Ethereum Scaled Agile Framework (SAFe) Security architecture and models Threat Detection/Modelling/Management Average Pay Premium: 18 percent of base salary equivalent Market Value Increase: 5.9 percent (in the six months through April 1, 2024)

### 26. HL7

Average Pay Premium: 17 percent of base salary equivalent Market Value Increase: 30.8 percent (in the six months through April 1, 2024)

### 27. Bioinformatics

Average Pay Premium: 17 percent of base salary equivalent Market Value Increase: 21.4 percent (in the six months through April 1, 2024)

### 28. Amazon RedShift

Data Privacy E-Discovery Vulnerability Scanning/Assessment/Management Average Pay Premium: 17 percent of base salary equivalent Market Value Increase: 13.3 percent (in the six months through April 1, 2024)

# NON-CERTIFIED IT SKILLS ANALYSIS - Winners, cont'd.

### 32. Marketo

Average Pay Premium: 17 percent of base salary equivalent Market Value Increase: 6.3 percent (in the six months through April 1, 2024)

### 33. A.I. Chatbot

# **Requirements Engineering/Analysis**

**Teradata** Average Pay Premium: 16 percent of base salary equivalent Market Value Increase: 23.1 percent (in the six months through April 1, 2024)

### 36. Go language (Golang)

Average Pay Premium: 16 percent of base salary equivalent Market Value Increase: 14.3 percent (in the six months through April 1, 2024)

### 37. Apache Hive

Penetration testing Six Sigma/Lean Six Sigma Test automation Average Pay Premium: 16 percent of base salary equivalent Market Value Increase: 6.7 percent (in the six months through April 1, 2024)

Foote Partners News Release – April 21, 2024

# **IT Certification Data Trend Charts & Analysis**

(Data collected through April 1, 2024)

### 632 Tech Certifications Reported

Certified Data Privacy Solutions Engineer/ISACA(CDPSE)

AccessData Certified Examiner Adobe/Magento 2 Certified Developer-Associate Adobe/Magento 2 Certified Developer-Professional Arcitura Certified Cloud Security Specialist Artificial Intelligence Engineer (AIE) Avaya Certified Design Specialist Avaya Certified Implementation Specialist Avaya Certified Integration Specialist Avava Certified Solution Specialist Avaya Professional Design Specialist AWS Certified Advanced Network - Specialty AWS Certified Data Analytics – Specialty AWS Certified Developer - Associate AWS Certified DevOps Engineer - Professional AWS Certified Security - Specialty AWS Certified Solutions Architect - Associate (Cloud) AWS Certified Solutions Architect - Professional (Cloud) AWS Certified SysOpsAdministrator-Associate (Cloud) **AXELOS ITIL 4 certifications BICSI ITS Technician BICSI Technician and Registered Communications** Distribution Designer Brocade Certified Network Engineer Brocade Certified Network Professional Brocade Certified Fabric Designer Brocade Certified Fabric Professional (BCFP) BTA Certified Blockchain Security Professional (CBSP) Certificate in Information Security Management Principles (CISMP) Certificate of Cloud Security Knowledge (CCSK) Certificate of Cloud Auditing Knowledge (CCAK) Certification Authorization Professional (CAP) Certification of Capability in Business Analysis (CCBA) Certified Analytics Professional (CAP) Certified Artificial Intelligence Scientist (CAIS) Certified Business Analysis Professional (CBAP) Certified Business Continuity Manager/ISO 22301(CBCM) Certified Business Continuity Professional (CBCP) Certified Business Process Associate (CBPA) Certified Business Process Leader (CBPL) Certified Business Process Professional (CBPP)

Certified Cisco Systems Instructor (CCSI)

Certified Cloud Technology Professional

Certified Compliance Professional

Certified Computer Examiner (CCE)

Certified Cloud Security Professional (CCSP)

Certified Computing Professional (CCP-ISC2)

Certified Data Centre Management Professional (CDCMP)

Certified Cloud Architect

Certified Data Professional (CDP) Certified Disaster Recovery Engineer (C/DRE) Certified Enterprise Coach (Scrum/Agile) Certified Forensic Computer Examiner (CFCE) Certified Fraud Examiner Certified Healthcare Information Security and Privacy Practitioner (HCISPP) Certified in Convergent Network Technologies (CCNT) Certified in Emerging Technology(CET-ISACA) Certified in Governance, Risk and Compliance(CGRC) Certified in Risk and Information Systems Control (CRISC) Certified in the Governance of Enterprise IT (CGEIT) Certified Information Privacy Manager- all countries Certified Information Privacy Professional - all countries Certified Information Privacy Technologist- all countries Certified Information Security Manager (CISM) Certified Information Systems Auditor (CISA) Certified Information Systems Risk Manager/Mile2 Certified Information Systems Security Professional (CISSP) Certified IP Telecom Network Specialist (CIPTS) Certified IT Architect (IASA CITA) Certified Kubernetes Administrator (CKA) Certified Kubernetes Security Specialist (CKS) Certified Manager of Software Quality (CMSQ) Certified Penetration Testing Engineer (CPTE) Certified Protection Professional Certified Scrum Developer Certified Scrum Product Owner Certified Scrum Product Owner - Advanced Certified Scrum Professional - ScrumMaster Certified Scrum Team Coach Certified Scrum Trainer Certified ScrumMaster Certified ScrumMaster - Advanced Certified Secure Software Lifecycle Professional (CSSLP) Certified Software Quality Analyst (CSQA) Certified Telecommunications Network Specialist (CTNS) Check Point Certified Security Administrator (CCSA) Check Point Certified Security Expert (CCSE) Check Point Certified Security Master (CCSM) Cisco Certified CyberOps Associate Cisco Certified CyberOps Professional Cisco Certified Design Expert (CCDE) Cisco Certified DevNet Associate Cisco Certified DevNet Professional Cisco Certified DevNet Expert Cisco Certified Entry Network Technician (CCENT)

Cisco Certified Internetwork Expert (CCIE, all variations) Cisco Certified Network Associate - Data Center Cisco Certified Network Associate (CCNA Routing and Switching) Cisco Certified Network Associate (Network Security) Cisco Certified Network Associate (Networking automation and programmability) Cisco Certified Network Associate (was CCNA Cloud) Cisco Certified Network Associate (was CCNA Collaboration) Cisco Certified Network Associate (was CCNA Wireless) Cisco Certified Network Associate (was Design Associate) Cisco Certified Network Professional - Collaboration Cisco Certified Network Professional - Data Center Cisco Certified Network Professional - Service Provider Cisco Certified Network Professional - Enterprise/Design Cisco Certified Network Professional - Enterprise/Routing and Services Cisco Certified Network Professional - Enterprise/Wireless Networks Cisco Certified Network Professional (CCNP-all) Cisco Certified Network Professional - Security Cisco Certified Systems Instructor (CCSI) Cisco Data Center Unified Computing Design Specialist Cisco Data Center Unified Fabric Support Specialist Citrix Certified Associate - Networking Citrix Certified Associate - Virtualization Citrix Certified Expert – Networking Citrix Certified Expert - Virtualization Citrix Certified Instructor (CCI - Virtualization, Networking, or Mobility) Citrix Certified Professional - Networking Citrix Certified Professional - Virtualization (CCP-V) Citrix XenServer Certified (CC-XenServer) CIW Advanced HTML5 and CSS3 Specialist **CIW Certified Database Design Specialist** CIW Web Design Professional CIW Web Development Professional **CIW Web Foundations Associate CIW Web Security Professional** Cloud U (Rackspace) Cloudera Certified Associate Administrator Cloudera Certified Associate Data Analyst Cloudera Certified Associate Spark and Hadoop Developer Cloudera Certified Professional: Data Engineer CompTIA A+ CompTIA Advanced Security Practitioner

## Foote Partners News Release – April 21, 2024

CompTIA Certified Technical Trainer CompTIA Cloud Essentials CompTIA Cloud+ CompTIA Cybersecurity Analyst+ CompTIA Linux+ CompTIA Mobile App Security+ CompTIA Mobility+ CompTIA Network+ CompTIA Penetration Tester CompTIA Project+ CompTIA Security+ CompTIA Server+ CompTIA Storage+ Convergence Technologies Professional (CTP) CSX CyberSecurity Practitioner (CSXP) CWNP Certified Wireless Security Professional (CWSP) CWNP/Certified Wireless Analysis Professional (CWAP) CWNP/Certified Wireless Design Professional (CWDP) CWNP/Certified Wireless Network Administrator (CWNA) CWNP/Certified Wireless Network Trainer (CWNT) CWNP/Certified Wireless Network Expert (CWNE) CWNP/Certified Wireless Technology Specialist (CWTS) Cyber Security Forensic Analyst Dell Cloud Infrastructure - Specialist Dell Cloud Services Architect - Expert Dell Data Science Associate Dell Data Science Specialist - Advanced Analytics Dell EMC Technology Architect - Expert Dell EMC Technology Architect - Specialist Dell Implementation Engineer - Expert **Dell Implementation Engineer - Specialist** Dell Information Storage and Management Associate Dell Information Storage and Management Expert **Dell Information Storage and Management Specialist** Dell Platform Engineer/PowerScale - Specialist EC-Council Certified Application Security Engineer (CASE) EC-Council Certified Cloud Security Engineer (CCSE) EC-Council Certified DevSecOps Engineer (ECDE) EC-Council Certified Encryption Specialist v2(ECES) EC-Council Certified Ethical Hacker (CEH) EC-Council Certified Incident Handler V2 (ECIH) EC-Council Certified Network Defender EC-Council Certified Penetration Testing Professional EC-Council Certified SOC Analyst (ECSA) EC-Council Computer Hacking Forensic Investigator EC-Council Disaster Recovery Professional (EDRP) EC-Council Web Appication Hacking and Security Testina

Fortinet Network Security Expert (NSE) Level 1

## 632 Tech Certifications Reported

# Foote Partners News Release - April 21, 2024

Fortinet Network Security Expert (NSE) Level 2 Fortinet Network Security Expert (NSE) Level 3 Fundamentals of Google AI for Web-Based Machine Learning GIAC Assessing and Auditing Wireless Networks GIAC Certified Defending Advanced Threats (GDAT) GIAC Certified Detection Analyst (GCDA) GIAC Certified Enterprise Defender (GCED) GIAC Certified Forensics Analyst (GCFA) GIAC Certified Forensics Examiner GIAC Certified Incident Handler (GCIH) GIAC Certified Intrusion Analyst (GCIA) GIAC Certified Project Manager (GCPM) **GIAC Certified Web Application Defender** GIAC Certified Windows Security Administrator (GCWN) GIAC Cloud Forensic Responder (GCFR) GIAC Cloud Penetration Tester (GCPN) GIAC Cloud Security Automation (GCSA) GIAC Cloud Security Essentials (GCLD) GIAC Continuous Monitoring Certification (GMON) GIAC Critical Controls Certifications (GCCC) GIAC Cyber Threat Intelligence (GCTI) GIAC Defending Advanced Threats (GDAT) GIAC Defensible Security Architecture (GDSA) GIAC Enterprise Vulnerability Assessor (GEVA) GIAC Exploit Researcher and Advanced Penetration Tester (GWAPT) GIAC Information Security Fundamentals (GISF) GIAC Information Security Professional (GISP) GIAC Mobile Device Security Analyst (GMOB) GIAC Network Forensic Analyst (GNFA) GIAC Penetration Tester (GPEN) GIAC Public Cloud Security (GPCS) GIAC Python Coder (GPYC) GIAC Reverse Engineering Malware (GREM) GIAC Security Essentials (GSEC) GIAC Security Leadership (GSLC) GIAC Security Operations Certified (GSOC) GIAC Security Operations Manager (GSOM) GIAC Systems and Network Auditor (GSNA) GIAC Web Application Penetration Tester (GWAPT) Global Industrial Cyber Security Professional (GICSP) Google Cloud - Professional Cloud Architect Google Cloud - Professional Data Engineer Google Cloud - Professional Network Engineer Google Cloud Associate - Cloud Engineer Google Cloud DevOps Engineer Google Professional Cloud Developer

Google Professional Machine Learning Engineer Google Cloud - Professional Cloud Security Engineer HDI Customer Service Representative HDI Desktop Support Manager HDI Desktop Support Technician HDI Support Center Analyst HDI Support Center Director HDI Support Center Manager HDI Support Center Team Lead HDI Technical Support Professional Help Desk Analyst: Tier 1 Support Specialist/Ed2Go Help Desk Team Lead/RCCSP Hitachi Qualified Professional - Storage Administration HP Accredited Solutions Expert (ASE - all) HP Accredited Technical Professional (ATP - all) HP ASE - Storage Solutions V4 HP ATP - Hybrid IT Solutions V2 HP ATP - Storage Solutions V1 /V2 HP Master Accredited Solutions Expert (MASE - all) Huawei Certified Network Professional (all) Huawei Certified Network Expert (all) IAPP Certified Information Privacy Professional HP Master ASE – Hybrid IT Solutions Architect V1 HP Master ASE - Storage Solutions Architect V3 Huawei Certified Network Associate (all) IBM Advanced Systems Administrator (all) IBM AI Engineering Professional Certificate IBM Certified Administrator - Cognos Analytics IBM Certified Application Developer - Cloud Solutions v3 IBM Certified Application Developer - DB2 9.7 for Linux. Unix and Windows IBM Certified Application Developer (all) IBM Certified Data Architect - Big Data IBM Certified Data Engineer - Big Data IBM Certified Database Administrator - DB2 11.1 for Linux, UNIX and Windows IBM Certified Developer - Cognos Analytics IBM Certified Professional Developer - Cloud v4 IBM Certified Professional SRE - Cloud v1 IBM Cloud Security Engineer Specialty IBM Certified Solution Advisor - Blockchain Platform V2 IBM Certified Solution Advisor - DevOps V2 IBM Certified Solution Architect - Cloud v4 IBM Certified Solution Architect - Data Warehouse V1 IBM Certified Solution Designer (all) IBM Certified Specialist - AI Enterprise Workflow V1 IBM Certified Systems Administration: WebSphere Application Server Network Deployment IBM Certified Systems Administrator (all)

IBM Cloud Security Engineer Specialty Information Systems Security Architecture Professional (ISSAP/CISSP) Information Systems Security Engineering Professional (ISSEP/CISSP) InfoSys Security Management Professional (ISSMP/CISSP) ITIL Expert Certification ITIL Foundation Certification ITII Intermediate Certification ITIL Master Certification JBoss Certified Developer (Seam, Persistence, ESB) Juniper Networks Certified Internet Associate Juniper Networks Certified Internet Expert Juniper Networks Certified Internet Professional Juniper Networks Certified Internet Specialist Linux Foundation Certified Engineer Linux Foundation Certified System Administrator Linux Professional Institute certification (LPIC-2) Linux Professional Institute certification (LPIC-3) MCSE: Core Infrastructure Microsoft Certified Azure Administrator Microsoft Certified Azure Administrator Associate Microsoft Certified Azure Al Engineer Associate Microsoft Certified Azure Data Engineer Associate Microsoft Certified Azure Data Scientist Associate Microsoft Certified Azure Developer Associate Microsoft Certified Azure Fundamentals Microsoft Certified Azure Security Engineer Associate Microsoft Certified Azure Solutions Architect Microsoft Certified Azure Solutions Architect Expert Microsoft Certified DevOps Engineer Expert Microsoft Certified Professional Microsoft Certified Solutions Associate(all) Microsoft Certified Power BI Data Analyst Associate Microsoft Certified Solutions Associate: SQL 2016 DBA Microsoft Certified Solutions Associate: Windows Server 2012/2016 Microsoft Certified Solutions Developer (MCSD) Microsoft Certified Dynamics 365 Associate(all business applications) Microsoft Certified Solutions Expert: Data Platform Microsoft Certified Solutions Expert: Desktop Infrastructure Microsoft Certified Trainer (MCT) Microsoft MTA: Windows OS Microsoft Office Specialist Mile2 Certified Cloud Security Officer(C)CSO) Mongo DB Certified DBA Mongo DB Certified Developer MongoDB Certified Developer Associate

NetApp Certified Data Administrator, ONTAP (NCDA) NetApp Certified Hybrid Cloud Architect NetApp Certified Implementation Engineer (NCIE) NetApp Certified Storage Associate - Hybrid Cloud NetScout/nGenius Certified Analyst (nCA) NetScout/nGenius Certified Associate (nCA) NetScout/nGenius Certified Expert (nCE) NetScout/nGenius Certified Specialist (nCS) Novell Certified Administrator (CNA) Novell Certified Novell Engineer (CNE) Novell Certified Instructor Novell Certified Linux Engineer (Novell CLE) Novell Certified Linux Professional (Novell CLP) Novell Identity Manager Administrator Offensive Security Defense Analyst (OSDA) Offensive Security Certified Expert Offensive Security Experienced Penetration Tester Offensive Security Exploit Developer (OSED) Offensive Security Exploitation Expert (OSEE) Offensive Security Professional (OSCP) Offensive Security Web Assessor (OSWA) Offensive Security Web Expert (OSWE) Offensive Security Wireless Professional (OSWP) Okta Certified Administrator Okta Certified Consultant Okta Certified Developer Okta Certified Professional Open Group Certified Architect (Open CA) Open Group Certified IT Specialist (Open CITS) Oracle Business Intelligence Foundation Suite 11G Certified Implementation Specialist Oracle Certified Associate - DBA (OCA) Oracle Certified Associate - Java SE 8 Programmer Oracle Certified Associate - MySQL 5 Oracle Certified Associate - WebLogic Server 12c Admin Oracle Certified Expert - Java SE Developer Oracle Certified Expert - MvSQL 5.1 Cluster Database Administrator Oracle Certified Expert - Siebel CRM Business Analyst Oracle Certified Expert - Solaris 10 Network Administrator for Solaris Oracle Certified Master - DBA (OCM) Oracle Certified Master - Java EE Enterprise Architect Oracle Certified Master - Java SE Developer Oracle Certified Professional - Advanced PL/SQL Developer **Oracle Certified Professional - Application Server** Administrator

Oracle Certified Professional - Database Cloud Administrator

### **632 Tech Certifications Reported**

### Foote Partners News Release - April 21, 2024

Oracle Certified Professional - DBA (OCP) Oracle Certified Professional - Fusion Middleware 11g/12c Forms Developer Oracle Certified Professional - Java EE Web Component Developer Oracle Certified Professional - Java EE Web Services Developer Oracle Certified Professional - Java SE Programmer Oracle Certified Professional - MvSQL 5.x Database Administrator Oracle Certified Professional - MySQL 5.x Developer Oracle Certified Professional - Solaris 10 Systems Administrator Oracle Certified WebLogic Server 12c Administrator Oracle Cloud Infrastructure 2022/2023 Certified Architect Professional Oracle Database PL/SQL Developer Certified Professional Oracle E-Business Suite 12 Certified Implementation Specialist Oracle Linux Certified Administrator (OCA) Oracle SOA Suite 12c Implementation Specialist Oracle VM 3.0 for x86 Certified Implementation Specialist Pegasystems Certified Data Scientist Pegasystems Certified Decisioning Consultant Pegasystems Certified Lead System Architect Pegasystems Certified Senior Systems Architect Pegasystems Certified System Architect Pegasystems Certified Pega Business Architect Pegasystems Certified Robotics System Architect PHP Certification **Pivotal Application Architect** Pivotal Cloud Foundry Operator certification Pivotal Developer PMI Agile Certified Practitioner (PMI-ACP) PMI Certified Associate in Project Management (CAPM) PMI Portfolio Management Professional (PfMP) PMI Professional in Business Analysis (PMI-PBA) PMI Program Management Professional (PgMP) PMI Project Management Professional (PMP) PMI Risk Management Professional (PMI-RMP) Prince2 Foundation Prince2 Practitioner Professional Certified Investigator Professional in Project Management (GAQM) **Qlik Sense Business Analyst Qlik Sense Data Architect** Qualified Information Security Professional Q/ISP Rackspace Certified Technician

Red Hat Certified Architect (RHCA) Red Hat Certified Architect: Cloud Red Hat Certified Architect: Enterprise Applications Red Hat Certified Architect: Infrastructure Red Hat Certified Engineer (RHCE) Red Hat Certified Enterprise Application Developer Red Hat Certified Specialist in Business Process Design Red Hat Certified Specialist in Cloud Infrastructure Red Hat Certified Specialist in Linux Performance Tuning Red Hat Certified Specialist in Messaging Administration Red Hat Certified Systems Administrator (RHCSA) RSA Certified Administrator (RSA/CA) RSA Certified Instructor (RSA/CI) SAFe Certification Salesforce B2C Commerce Developer Salesforce Certified Administrator Salesforce Certified Advanced Administrator Salesforce Certified Application Architect Salesforce Certified Data Architect Salesforce Certified Integration Architecture Designer Salesforce Certified Platform Developer Salesforce Certified Systems Architect Salesforce Certified Technical Architect Salesforce Certified User Experience Designer Salesforce Identity and Access Management Architect Salesforce Platform App Builder SAS Certified Big Data Professional Using SAS 9 SAS Certified Data Integration Developer for SAS 9 SAS Certified Data Scientist Using SAS 9 SAS Certified Predictive Modeler - SAS Enterprise Miner SAS Certified Professional: Advanced Programming/SAS 9.4 SAS Certified Specialist Base Programming/SAS 9.4 SAS Certified Statistical Business Analyst - SAS 9 SAS Certified Advanced Analytics Professional Using SAS 9 SAS Certified Data Quality Steward for SAS® SAS Certified Professional: AI and Machine Learning SAS Certified Professional: Data Curation for SAS Data Scientists SAS Certified Specialist: Visual Business Analytics ServiceNow Certified Application Developer (CAD) ServiceNow Certified Implementation Specialist (CIS) ServiceNow Certified Systems Administrator (CSA) Siebel 8 Consultant Certified Expert Six Sigma Black Belt Six Sigma Green Belt Six Sigma Master Black Belt Six Sigma Yellow Belt

SNIA Certified Storage Architect SNIA Certified Storage Networking Expert (SCSN-E) SNIA Certified Storage Professional SNIA Certified Systems Engineer Sniffer Certified Expert SolarWinds Certified Professional (SCP) SonicWall Network Security Administrator Splunk Core Certified User SUSE Certified Administrator SUSE Enterprise Engineer (SCE) SUSE Enterprise Architect or (SEA) Systems Security Certified Practitioner (SSCP) Tableau Desktop Certified Professional Tableau Server Certified Professional Teradata 14 Certified Associate Teradata 14 Certified Database Administrator Teradata 14 Certified Database Developer Teradata 14 Certified Enterprise Architect Teradata 14 Certified Master Teradata 14 Certified Professional Teradata 14 Certified Solutions Developer Teradata 14 Certified Technical Specialist **TIBCO Certified Professional** TIBCO Certified SOA Architect TOGAF 9 Certified Virtualization Council Master Infrastructure Architect VMware Certified Advanced Professional - Digital Workspace VMware Certified Advanced Professional 6.5 - Data Center Virtualization Design VMware Certified Advanced Professional – Network Virtualization VMware Certified Advanced Professional (all) VMware Certified Advanced Professional 6 - Data Center Virtualization Deployment VMware Certified Advanced Professional 6/7 - Cloud Mgt and Automation Deployment VMware Certified Advanced Professional 6/7 - Cloud Mat and Automation Design VMware Certified Design Expert - Network Virtualization VMware Certified Design Expert - Cloud Mgt and Automation VMware Certified Design Expert (all) VMware Certified Design Expert 6 - Data Center Virtualization VMware Certified Professional - Digital Workspace VMware Certified Professional - Desktop Management 2021 VMware Certified Professional - Network Virtualization VMware Certified Professional - Security 2021

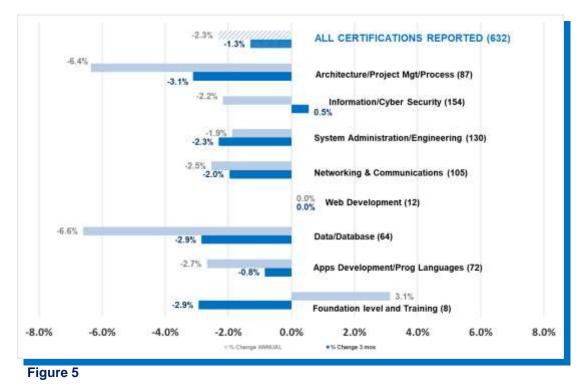
VMware Certified Professional 6 - Data Center Virtualization (VCP6-DCV) VMware Certified Professional 6.5 - Data Center Virtualization (VCP6.5-DCV) VMware Certified Professional 6/6.5 VMware Certified Professional 6/7 - Cloud Mgt and Automation VMware Certified Technical Associate - Data Center Virtualization Zachman Certified - Enterorise Architect

# IT CERTIFICATIONS PAY SUMMARY – Through April 1, 2024

# A. CERTIFIED IT SKILLS PAY PERFORMANCE: By Category

**TECH CERTIFICATIONS**. 166 of 629 IT certifications changed cash market value in 1Q 2024 compared to 133 of 619 certification in the prior quarter and 97 of 614 the quarter before that. The average **c**ash pay premium for IT certifications declined 1.3% in the quarter following gains in the prior quarter.

# IT Certifications - % Growth/Decline 3 months & 12 months



(632 certifications, data through 4/1/2024)

Source: Foote Partners IT Skills & Certifications Pay Index™, 1st Quarter 2024 data

# 4-YEAR IT CERTIFICATIONS PAY TRENDS

(Through 4/1/2024 – 97,733 IT Professionals)

17-YEAR IT CERTIFICATIONS PAY TRENDS BY	
CATEGORY	

% Change in Average Median Pay for a Single IT Certification)

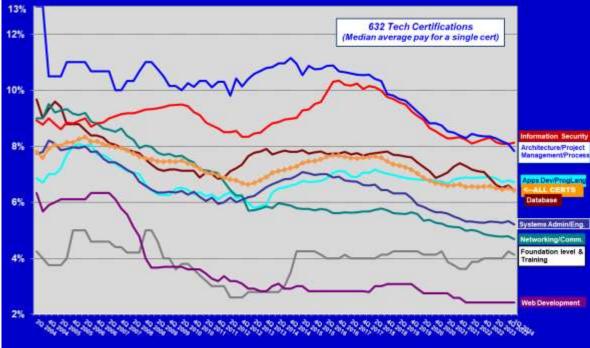
(Through 4/1/2024 – 97,733 IT Professionals)

SOURCE: Foote Partners 2024 <u>IT Skills & Certifications Pay Index™</u>

IT CERTIFICATIONS CATEGORIES	Change in Average Premium Pay by Category							
	# of certs surveyed	% Change 3 mos	% Change 6 mos	% Change ANNUAL	% Change 2 yrs	% Change 3 yrs	% Change 4 yrs	
Training and Beginner/Foundation level	8	-2.9%	3.1%	3.1%	13.8%	-2.9%	-2.9%	
Apps Development/Prog. Languages	72	-0.8%	0.0%	-2.7%	-2.5%	-0.4%	-1.2%	
Data/Database	64	-2.9%	-1.9%	-6.6%	-12.1%	-8.0%	-13.7%	
Web Development	12	0.0%	0.0%	0.0%	0.0%	-12.1%	-17.1%	
Networking & Communications	105	-2.0%	-1.8%	-2.5%	-5.9%	-10.4%	-15.9%	
System Administration/Engineering	130	-2.3%	-1.2%	-1.9%	-2.0%	-7.7%	-11.9%	
Information/Cyber Security	154	0.5%	0.4%	-2.2%	-1.4%	-3.3%	-10.6%	
Architecture/Project Management/Process	87	-3.1%	-4.3%	-6.4%	-5.6%	-10.5%	-15.3%	
ALL CERTIFICATIONS REPORTED	632	-1.31%	-0.67%	-2.31%	-1.98%	-3.57%	-8.58%	

# IT Certifications Premium Pay - by Category, Last 21 Years





Pay data supporting these charts available in the IT Skills and Certifications Pay Index<sup>TM</sup> – 1Q 2024 data edition

# HIGHEST PAYING IT Certifications (cash pay premiums for all 632 certs surveyed, ranked)

These IT certifications are among those earning the highest pay premiums (data collected January 1, 2024 to April 1, 2024). Shown in alphabetical order by <u>overall rank in descending order</u> including ties. Green/Red = increased/decreased in market value this quarter. Purple = Made the list this quarter for first time.

#### 1. GIAC Security Leadership

2. Certified Business Process Leader GIAC Strategic Planning, Policy, and Leadership Zachman Certified - Enterprise Architect

### 3. Certificate of Cloud Security Knowledge Certified Cloud Security Professional

Certified Forensic Computer Examiner Certified Information Security Manager Certified Secure Software Lifecycle Professional Certified Software Quality Manager Cisco Certified Network Professional - Security CyberSecurity Forensic Analyst InfoSystems Security Engineering Professional InfoSysyems Security Management Professional TOGAF 9 Certified

4.[Tie] Certified Artificial Intelligence Scientist

Certified Business Process Professional Certified Data Privacy Solutions Engineer Certified in Governance, Risk and Compliance Certified in the Governance of Enterprise IT Certified Information Privacy Manager- all countries Certified Information Privacy Technologist- all countries Certified Information Systems Security Professional Certified Professional Scrum Product Owner Certified Scrum Product Owner – Advanced

Certified ScrumMaster - Advanced Check Point Certified Security Master Cisco Certified CyberOps Professional EC-Council Certified Encryption Specialist v2 EC-Council Certified Ethical Hacker GIAC Exploit Researcher and Advanced Penetration Tester GIAC Reverse Engineering Malware

#### GIAC Security Operations Manager

InfoSystems Security Architecture Professional Mile2 Certified Cloud Security Officer Pegasystems Certified Lead System Architect Pegasystems Certified Senior Systems Architect PMI Risk Management Professional Six Sigma Master Black Bel

#### 5.[Tie] AWS Certified Data Analytics - Specialty

AWS Certified Security - Specialty Certificate in Information Security Management Principles Certificate of Cloud Auditing Knowledge Certification of Capability in Business Analysis Certified Business Continuity Manager/ISO 22301 Certified Business Continuity Professional Certified Computer Examiner Certified Enterprise Coach (Scrum/Agile) Certified Fraud Examiner Certified Healthcare Information Security and Privacy Practitioner Certified in Risk and Information Systems Control Certified Information Systems Auditor Certified Information Systems Risk Manager/Mile2 Certified Kubernetes Security Specialist Certified Penetration Testing Engineer Certified Scrum Professional - ScrumMaster Certified ScrumMaster

Check Point Certified Security Expert CompTIA Advanced Security Practitioner CompTIA Cybersecurity Analyst+ EC-Council Certified Chief Information Security Officer EC-Council Certified Cloud Security Engineer EC-Council Certified DevSecOps Engineer EC-Council Certified Network Defender EC-Council Certified Penetration Testing Professional

EC-Council Certified SOC Analyst

#### EC-Council Certified Threat Intelligence Analyst EC-Council Web Application Hacking and Security Testing Fortinet Certified Expert in Cybersecurity GIAC Defending Advanced Threats GIAC Experienced Cyber Security **GIAC Experienced Forensic Analyst GIAC Experienced Incident Handler GIAC** Penetration Tester **GIAC Web Application Penetration Tester** Google Cloud - Professional Cloud Architect Google Cloud - Professional Cloud Security Engineer Microsoft Certified: Azure Al Engineer Associate Offensive Security Certified Professional Offensive Security Exploitation Expert Okta Certified Developer **Open Group Certified Architect** Oracle Certified Master - DBA Oracle Certified Master - Java SE Developer Oracle Cloud Platform Application Integration Certified Professional Pegasystems Certified Data Scientist Pegasystems Certified System Architect **Pivotal Application Architect** PMI Portfolio Management Professional Red Hat Certified Specialist in Business Process Design SAFe Certification

Salesforce Certified Technical Architect Systems Security Certified Practitioner) TIBCO Certified Architect VMware Certified Professional - Security

Source: Foote Partners IT Skills & Certifications Pay Index<sup>TM</sup>, 1Q 2024 data edition

# IT CERTIFICATION PAY TREND HIGHLIGHTS: Market Value Gainers & Highest Paying – 1st Quarter 2024 data

These tech certifications gained 10% or more in market value in the three months ending April 1, 2024 vs. prior quarter (seen below grouped by segment). Listed in alphabetical order within each group. Highest paying skills listed on right in alphabetical order.

# **IT CERTIFICATION Gainers**

### Info/Cyber Security certifications

Certified Information Privacy Manager- all countries Certified Information Privacy Professional - all countries Certified Information Privacy Technologist- all countries Certified Information Systems Security Professional Check Point Certified Security Master Cisco Certified Network Professional - Security **GIAC Certified Enterprise Defender** GIAC Certified Incident Handler GIAC Defending Advanced Threats GIAC Defensible Security Architect GIAC Security Operations Certified Google Cloud - Professional Cloud Security Engineer InfoSys Security Architecture Professional (ISSAP/CISSP) Microsoft Certified: Azure Security Engineer Associate Systems Security Certified Practitioner

### Systems Administration certifications

Citrix Certified Expert - Networking Citrix Certified Professional-Virtualization IBM Certified Solution Architect – Cloud v4 Microsoft Certified Azure Solutions Architect Microsoft Certified Solutions Associate(all) Red Hat Certified Specialist in Cloud Infrastructure VMware Certified Advanced Professional 6/7 - Cloud Mgt and Automation Deployment VMware Certified Advanced Professional 6/7 - Cloud Mgt and Automation Design VMware Certified Professional - Digital Workspace VMware Certified Professional 6 - Data Center Virtualization VMware Certified Professional 6/7 - Cloud Mgt and Automation VMware Certified Professional 6/7 - Cloud Mgt and Automation VMware Certified Professional 6/7 - Cloud Mgt and Automation

# Application Development/Programming Languages certifications

IBM Certified Application Developer - Cloud Solutions v3 IBM Certified Application Developer (all) IBM Certified Solution Designer (all) Oracle Certified Associate - Java SE 8 Programmer Oracle Certified Expert - Java SE Developer (all) Oracle Certified Master - Java SE Developer Oracle Cloud Platform Application Integration Certified Professional Pegasystems Certified Data Scientist Pegasystems Certified Lead System Architect Red Hat Certified Enterprise Application Developer

### Networking & Communications certifications

Cisco Certified Network Associate - Data Center Cisco Certified Network Associate (was CCNA Cloud) CWNP/Certified Wireless Network Expert CWNP/Certified Wireless Network Trainer CWNP/Certified Wireless Technology Specialist Huawei Certified Network Associate (all) Huawei Certified Network Expert (all) Huawei Certified Network Professional(all) NetScout/nGenius Certified Analyst NetScout/nGenius Certified Expert NetScout/nGenius Certified Specialist SolarWinds Certified Professional

### Architecture, Project Management, and Process

### **Certifications**

ITIL Foundation Certification Microsoft Certified: Azure AI Engineer Associate PMI Certified Associate in Project Management PMI Portfolio Management Professional PMI Professional in Business Analysis PMI Project Management Professional

PMI Risk Management Professional SAS® Certified Specialist: Visual Business Analytics Six Sigma Yellow Belt

### **Data/Database certifications**

IBM Certified Data Architect - Big Data IBM Certified Specialist - AI Enterprise Workflow V1 Microsoft Certified Solutions Expert: Data Platform Oracle Certified Associate - DBA Oracle Certified Master - DBA

Oracle Certified Professional - DBA Oracle Certified Professional - MySQL 5.x/8.x Database Administrator SAS Certified Advanced Analytics Professional Using SAS 9 Tableau Desktop Certified Professional Tableau Server Certified Professional

Source: Foote Partners <u>IT Skills & Certifications Pay Index<sup>TM</sup></u>, 1Q 2024 data edition

# IT CERTIFICATION PAY TREND HIGHLIGHTS: Market Value Losers – 1st Quarter 2024 data

These IT certifications declined 10% or more in market value in the three months ending April 1, 2024 vs. prior quarter (seen below grouped by segment). Listed in alphabetical order within each group.

# **TECH CERTIFICATIONS Losers**

#### Application Development/Programming Languages Adobe/Magento 2 Certified Developer-Associate Adobe/Magento 2 Certified Developer-Professional AWS Certified DevOps Engineer - Professional IBM Certified Application Developer - Cloud Solutions v3 IBM Certified Application Developer (all) IBM Certified Developer - Cognos Analytics IBM Certified Solution Designer (all) Microsoft Certified Dynamics 365 Associate(all business apps) Red Hat Certified Architect: Enterprise Applications Red Hat Certified Architect: Infrastructure Salesforce B2C Commerce Developer Salesforce Certified Application Architect Salesforce Certified Platform Developer(all) Salesforce Certified Systems Architect Salesforce Platform App Builder

### **Data/Database certifications**

Dell Data Science Associate (DCA-DS) Dell Data Science Specialist - Advanced Analytics (DCS-DA) IBM Certified Data Architect - Big Data IBM Certified Data Engineer - Big Data IBM Certified Solution Advisor - Blockchain Platform V2 Oracle Certified Master - DBA (OCM) Oracle Certified Professional - DBA (OCP) Qlik Sense Data Architect SAS Certified Big Data Professional Using SAS 9 SAS Certified Advanced Analytics Professional Using SAS 9 Teradata 14 Certified Database Developer Teradata 14 Certified Master Teradata 14 Certified Professional Teradata 14 Certified Professional

### **Systems Administration certifications**

Citrix Certified Expert - Networking Citrix Certified Expert - Virtualization IBM Certified Solution Architect - Cloud v4 IBM Certified Systems Administraton: WebSphere Application Server Network Deployment Linux Foundation Certified System Administrator Linux Professional Institute certification (LPIC-Level 3) Microsoft Certified Azure Administrator Microsoft Certified Azure Fundamentals Microsoft Certified Azure Solutions Architect Microsoft Certified Azure Solutions Architect Expert Microsoft Certified Solutions Associate(all) Microsoft Certified Solutions Expert: Desktop Infrastructure Red Hat Certified Engineer(RHCE) Red Hat Certified Specialist in Linux Performance Tuning Red Hat Certified Systems Administrator (RHCSA) Salesforce Certified Advanced Administrator SUSE Enterprise Architect (SEA) SUSE Enterprise Engineer (SCE) VMware Certified Design Expert - Cloud Mgt and Automation VMware Certified Design Expert (all) VMware Certified Design Expert 6 - Data Center Virtualization VMware Certified Professional 6 - Data Center Virtualization (VCP6-DCV) VMware Certified Professional 6.5 - Data Center Virtualization (VCP6.5-DCV) VMware Certified Professional 6/6.5 VMware Certified Professional 6/7 - Cloud Mgt and Automation

### Info/Cyber Security certifications

AWS Certified Security - Specialty Certificate of Cloud Security Knowledge (CCSK) Certified in Emerging Technology(CET-ISACA) CompTIA Advanced Security Practitioner (CASP) GIAC Certified Enterprise Defender (GCED) GIAC Cloud Forensic Responder (GCFR) GIAC Public Cloud Security (GPCS) GIAC Security Leadership (GSLC) GIAC Security Leadership (GSLC) GIAC Security Operations Certified (GSOC) GIAC Strategic Planning, Policy, and Leadership (GSTRT) GIAC Web Application Penetration Tester (GWAPT) Offensive Security Exploitation Expert (OSEE) Okta Certified Developer Okta Certified Professional

### Networking and Communications

Avaya Certified Design Specialist (ACDS) Avaya Certified Implementation Specialist Cisco Certified DevNet Expert Cisco Certified DevNet Professional Cisco Certified Internetwork Expert (CCIE, all variations) Dell Cloud Infrastructure - Specialist (DCS - CA) Dell Implementation Engineer - Specialist (DCS - IE) Dell Information Storage and Management Associate (DCA-ISM) Google Cloud - Professional Network Engineer Huawei Certified Network Associate (all) Huawei Certified Network Expert (all) Huawei Certified Network Professional (all) Juniper Networks Certified Expert (JNCIE - all specializations) NetScout/nGenius Certified Expert (nCE) NetScout/nGenius Certified Specialist (nCS)

Source: Foote Partners IT Skills & Certifications Pay Index™, 1Q 2024 data edition

# **IT CERTIFICATIONS ANALYSIS – Winners**

# A. IT CERTIFICATIONS: Paying well above average + gaining the most in market value

As a group, the 632 IT certifications tracked in our *IT Skills and Certifications Pay Index™* have decreased in market value in two of the last three calendar quarters but gained almost one percent in the 1st quarter 2024. Let's examine those certifications that have helped drive up average cash pay premiums at the beginning of 2024. The following IT certifications meet two prerequisites:

- They earned workers cash pay premiums well above the average of all certifications in our IT Skills and Certifications Pay IndexTM in guarter ending April 1, 2024.
- They recorded substantial gains in cash market value in the six months ending April 1, 2024.

None of the following IT certifications is earning less than the equivalent of 9 percent of base salary—significant considering the average for all skills reported is 6.5 percent of base—and every certification listed below grew somewhere in the 7 percent to 38 percent range in cash market value in the six months ending October 1st. *They are listed in descending ranked order of market value gain* (including ties).

Here is the list of IT certifications the meet the above criteria (in alphabetical order):

Certified Business Process Professional Certified Cloud Security Professional Certified Forensic Computer Examiner Certified Information Security Manager Cisco Certified Network Professional - Security Information Systems Security Engineering Professional Information Systems Security Management Professional Certified Data Privacy Solutions Engineer Certified Information Privacy Manager- all countries Certified Information Privacy Technologist- all countries Certified Information Systems Security Professional Certified Scrum Product Owner - Advanced Check Point Certified Security Master Cisco Certified CyberOps Professional EC-Council Certified Ethical Hacker GIAC Reverse Engineering Malware Information Systems Security Architecture Professional Pegasystems Certified Lead System Architect Pegasystems Certified Senior Systems Architect PMI Risk Management Professional

Below is the same list, but in descending ranked order of cash premium first and market value increase second (including ties).

\* \*

- Cisco Certified Network Professional Security Average Pay Premium: 11 percent of base salary equivalent Market Value Increase: 37.5 percent (in the six months through April 1, 2024)
- Certified Cloud Security Professional (ISC2-CCSP) Average Pay Premium: 11 percent of base salary equivalent Market Value Increase: 22.2 percent (in the six months through April 1, 2024)
- 3. Certified Forensic Computer Examiner (CFCE) Certified Information Security Manager (CISM) InfoSys Security Engineering Professional (ISSEP/CISSP) InfoSys Security Management Professional (ISSMP/CISSP) Average Pay Premium: 11 percent of base salary equivalent Market Value Increase: 10 percent (in the six months through April 1, 2024)

# IT CERTIFICATIONS ANALYSIS – Winners, cont'd.

- GIAC Reverse Engineering Malware (GREM) Average Pay Premium: 11 percent of base salary equivalent Market Value Increase: 42.9 percent (in the six months through April 1, 2024)
- Certified Information Privacy Manager- all countries Cisco Certified CyberOps Professional Information Systems Security Architecture Professional (ISSAP/CISSP) Average Pay Premium: 11 percent of base salary equivalent Market Value Increase: 25 percent (in the six months through April 1, 2024)
- 11. Certified Data Privacy Solutions Engineer(CDPSE-ISACA) Certified Information Privacy Technologist- all countries Certified Information Systems Security Professional (CISSP) Certified Scrum Product Owner - Advanced Check Point Certified Security Master (CCSM) EC-Council Certified Ethical Hacker (CEH) Pegasystems Certified Lead System Architect Pegasystems Certified Senior Systems Architect PMI Risk Management Professional (PMI-RMP) Average Pay Premium: 10 percent of base salary equivalent Market Value Increase: 11.1 percent (in the six months through April 1, 2024)

# IT CERTIFICATIONS ANALYSIS – Losers

# IT CERTIFICATIONS THAT HAVE LOST THE MOST MARKET VALUE OVER TIME

LOSING GROUND: Listed to the right are certifications in alphabetical order that have lost 30% to 50% percent of their cash pay premium market value in the 24-month period ending April 1, 2024. Some on this list are now retired or scheduled to be.

### Why have more certifications been losing value than gaining value?

Certifications decline in market value for a number of obvious and not so obvious reasons. Pay premiums may diminish as a certification expires, is retired, or is replaced with other certifications as technology evolves. Also, there remains a lingering bias that taking a proctored exam does not confer expertise in a subject on the test taker, especially when the pass rate is 70 percent (or less) correct answers. The certification industry has fought back against this bias by adding laboratory requirements and even peer review panels that decide if the candidate has qualified to receive designation.

But just as often it is their <u>popularity</u> that drives down pay premiums for a certification: as interest in a certification escalates and more people attain the certification, the gap between supply and demand for the certification narrows, driving down its market value as the laws of scarcity would dictate. This has been frequently documented in the case of dozens of certifications over the 20+ years Foote Partners has been tracking and reporting their cash pay premiums in the *IT Skills and Certifications Pay Index*.

Adobe/Magento 2 Certified Developer-Associate Certified Business Process Associate (CBPA) Certified Business Process Professional (CBPP) Certified in Convergent Network Technologies (CCNT) Certified in Governance, Risk and Compliance (CGRC, formerly CAP) Certified Information Privacy Technologist- all countries Certified Software Quality Analyst (CSQA) Certified Telecommunications Network Specialist (CTNS) Check Point Certified Security Administrator (CCSA) Cisco Certified Network Associate (was CCNA Wireless) Cisco Certified Network Professional - Enterprise/Wireless Networks CIW Web Security Professional CompTIA Advanced Security Practitioner (CASP) CompTIA Cloud Essentials CompTIA Network+ CompTIA Storage+ Convergence Technologies Professional (CTP) CSX CyberSecurity Practitioner (CSXP) CWNP Certified Wireless Security Professional (CWSP) EC-Council Certified Network Defender GIAC Certified Incident Handler (GCIH) Google Cloud Associate - Cloud Engineer HDI Support Center Team Lead IBM Advanced Systems Administrator (all) IBM Certified Solution Architect - Cloud v4 Microsoft MTA: Windows OS Microsoft Office Specialist Novell Certified Linux Engineer (CLE) Offensive Security Exploitation Expert (OSEE)

Open Group Certified Architect (Open CA) Open Group Certified Technical Specialist (Open CTS) Oracle Business Intelligence Foundation Suite 11G Certified Implementation Specialist Salesforce Certified Integration Architecture Designer Salesforce Certified User Experience Designer SAS® Certified Specialist: Visual Business Analytics Teradata 14 Certified Associate **GIAC Certified Intrusion Analyst** HP Accredited Solutions Expert (ASE - all) HP Accredited Technical Professional (ATP - all) HP ASE - Storage Solutions V4 HP ATP - Storage Solutions V1 /V2 HP Master Accredited Solutions Expert (MASE - all) HP Master ASE - Storage Solutions Architect V3 IBM Certified Application Developer - DB2 9.7 for Linux, Unix and Windows IBM Certified Database Administrator - DB2 11.1 for Linux, UNIX and Windows Microsoft MTA Windows OS Novell Certified Administrator Offensive Security Experienced Penetration Tester Offensive Security Wireless Professional Oracle PL/SQL Developer Associate Red Hat Certified Architect Red Hat Certified Architect: Cloud Salesforce Platform App Builder SAS Certified Big Data Professional Using SAS 9 SAS Certified Data Scientist Using SAS 9 SAS Certified Advanced Analytics Professional Using SAS 9 SAS Certified Professional: Data Curation for SAS Data Scientists Six Sigma Yellow Belt Teradata 14 Certified Database Administrator

# 2024 IT Skills & Certifications Pay Volatility Index™

Demand dynamics in benchmarked certified and non-certified IT skills pay

(Data collected through April 1, 2024)

### What is skills and certifications pay volatility?

Skills volatility is defined as the incidence of gains or declines in premium pay earned by tech professionals for specific certified and noncertified technical and business skills. Tracking volatility is useful for both analyzing and forecasting demand for skills, for monitoring IT workforce transition, and for understanding IT management decision making. Volatility offers valuable insights that salary movements and hiring behavior do not. Important in this distinction is that skills can be segmented and benchmarked more meaningfully than jobs. Similar to IT positions, there are the broad categories (e.g., security, networking, systems, database, applications development). But also, more narrow areas, for example---web/e-commerce development, storage area networking, virtualization, architecture, business process, project management, methodology. But unlike most jobs, within categories or niche are very specific vendor-specific or vendor independent niches and skill specializations that provide more granular analysis (e.g., SAP, AJAX, Ruby on Rails, Microsoft Sharepoint, collaboration appliances, Oracle database).

# **TRENDS** Cash Pay Premium Volatility for IT Skills and Certifications

Volatility in market value for individual IT skills and certifications---defined as incidence of gains or declines over a period of time in premium pay earned by IT professionals for specific technical and business skills--displayed a dramatically high increase from January 1, 2024 to April 1, 2024 according to the latest update of Foote Partners' long-running *IT Skills and Certifications Pay Index*<sup>TM</sup> of market values for tech skills. Market value is measured by tracking additional cash compensation paid to workers by their employers for specific certified and non-certified skills they possess.

# Current Quarterly Recap (data collected through April 1, 2024)

### **TOTAL: All Skills and Certifications**

- 30.5% of skills and certifications(406 of 1,333) recorded a change in cash pay premium in 1<sup>st</sup> Quarter 2024, dramatically higher than 26.2% the prior quarter when only 344 of 1,313 changed, and much higher than the 25.2% average quarterly volatility over the last two years. This was the highest volatility in any calendar quarter since 2016.
- **170** gained value while **236** declined in value in 1<sup>st</sup> Quarter 2024, higher than the 166 and 178, respectively in the prior quarter and dramatically higher than the 108/172 recorded in 3Q 2023.

### **CERTIFIED SKILLS**

- 26.4% of reported certifications(166 of 629) changed market value in 1<sup>st</sup> Quarter 2024, five points higher than the 21.5% (133 of 619) pay volatility in the prior quarter and also significantly higher than the 20.4% average quarterly volatility in the last 24 months.
- **60** certifications gained market value while **106** declined in value in 1compared to a smaller 70 and 63 respectively, in the prior quarter.

### **NON-CERTIFIED SKILLS**

- 34.1% of reported skills (240 of 704) changed value in 1<sup>st</sup> Quarter 2024, four points higher than the 30.4% (211 of 694) volatility in the prior quarter. This is significantly higher than the 30.9% twelve month average volatility and 29.4% two year average.
- **110** noncertified skills gained in market value while **130** declined in value in 1<sup>st</sup> Quarter 2024 compared to 96 and 115, respectively, in the prior quarter.

Tracking skills volatility is useful in many ways: analyzing and forecasting demand for skills; monitoring IT workforce transition; and understanding IT management decision making. In fact, we believe statistical volatility in IT skills pay offers a more complete story of true labor market conditions than salary movements and hiring behavior, among other common indicators. Important in this distinction is that skills can be segmented and benchmarked more meaningfully than jobs allowing microanalyses.

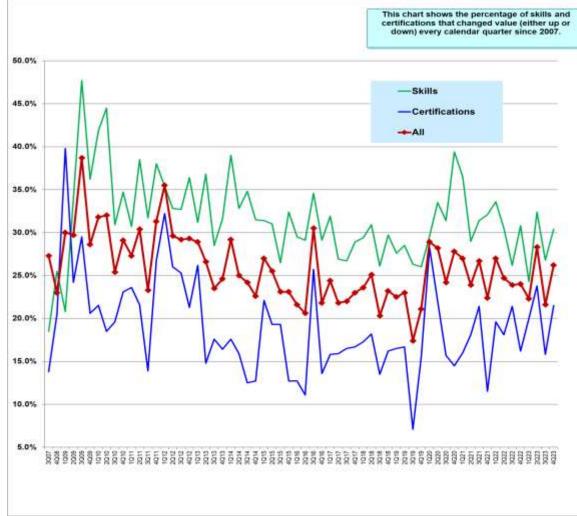
Similar to jobs, IT skills have broad skills categories that can be tracked (e.g., security, networking, systems, database, applications development). But unlike jobs, skills pay can be pinpointed to hundreds of niches and specializations. Also, unlike most job trends analyses, within skills categories and niches are *vendor-specific* and *vendor independent* skill specializations for more granular tracking, analysis, and forecasting.

Quarterly volatility for all 1,340 certified and non-certified skills in the last two years has been widely variable, in the 17% to 28% range. This is an important shift trend that we believe signals a move that employers are taking a more long-term view to building their tech workforces for evolving technologies such as Al/Machine Learning and a variety of digital solutions. Tech leaders right now are demanding more agility, faster reaction times, and more predictable execution; this is keeping volatility high as skills markets constantly adjust to meet surges in demand for specific certified and non-certified skills.

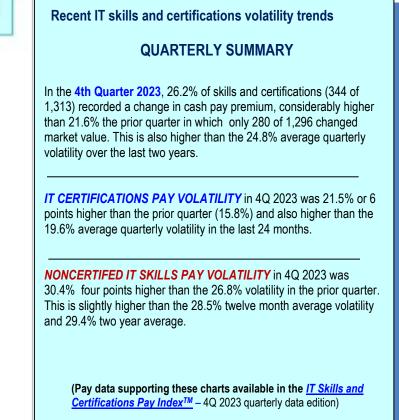
They will be able to achieve those capabilities through applying architecture principles and practices to people management.

# VOLATILITY HIGHLIGHTS - 17 Year Trending

# IT Skills and Certifications Volatility Index<sup>™</sup> – 1,340 Skills and Certifications



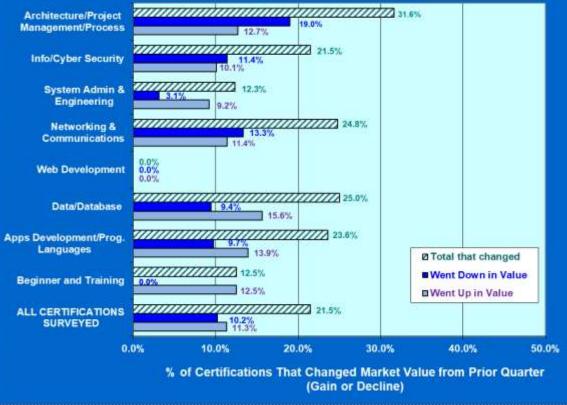
<sup>(</sup>Source: Foote Partners LLC, 2024 IT Skills & Certifications Pay Index™)



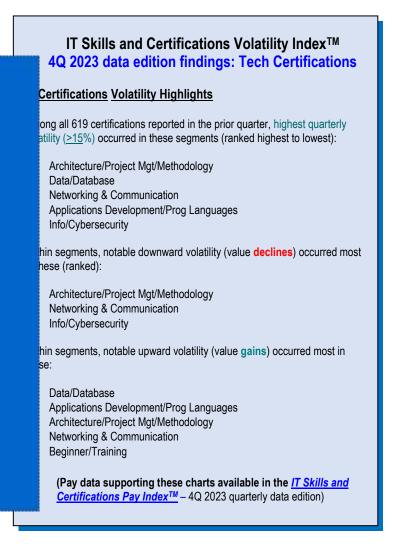
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# VOLATILITY HIGHLIGHTS IT Certifications – 4th Quarter 2023 datasets

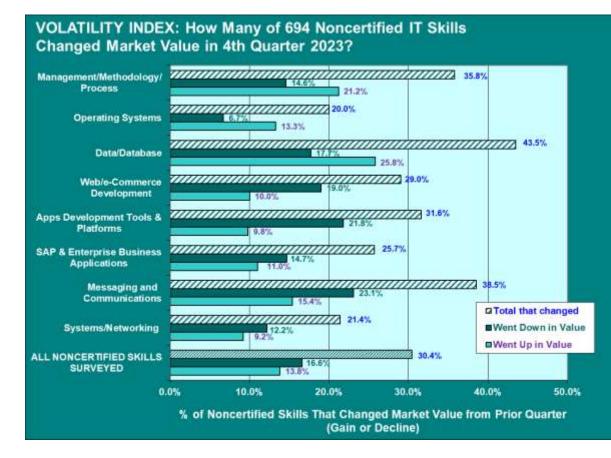
# VOLATITY INDEX: How Many of 619 IT Certifications Changed Market Value in 4th Quarter 2023?



(Source: Foote Partners LLC, 2024 IT Skills & Certifications Pay Index™)



# VOLATILITY HIGHLIGHTS Non-certified IT Skills – 4th Quarter 2023 datasets



(Source: Foote Partners LLC, 2024 IT Skills & Certifications Pay Index™)

# IT Skills and Certifications Volatility Index™ 4Q 2023 data edition findings: Non-certified IT Skills

### Non-certified IT Skill Pay Volatility Highlights

Among all 692 noncertified IT skills reported in the prior quarter, high volatility (>20%) occurred in all but one segments (ranked highest to lowest):

- Data/Database
- Messaging and Communications
- Management/ Methodology/Process
- Applications Development Tools & Platforms
- Web/Ecommerce Development
- SAP & Enterprise Business Applications
- Systems/Networking

Within segments, notable downward volatility (value **declines**) occurred most in these (ranked):

- Messaging and Communications
- Applications Development Tools & Platforms

Within segments, notable upward volatility (value **gains**) occurred most in these (ranked):

- Data/Database
- Management/ Methodology/Process

(Pay data supporting these charts available in the <u>IT Skills and</u> <u>Certifications Pay Index™</u> – 4Q 2023 quarterly data edition)

# 2024 IT Skills and Certifications Pay Index<sup>™</sup> (1st Quarter 2024 data edition)

- Pay premiums for 1,340 certified and noncertified IT skills
   Three data points for each position: 10<sup>th</sup>, 50<sup>th</sup>, 90<sup>th</sup> percentile
- Verified and validated IT skills pay data from **97,773 IT professionals at 4,391 employers** in US and Canada
- Current data collected through April 1, 2024 (updated quarterly)
- Excel format data tables allowing for data loading into third-party data analytics tools from PayScale, MarketPay, PayFactors, CompAnalyst, WillisTowersWatson, Mercer, et. al.
- Certifications Guide containing basic information about surveyed IT certifications (pre-requisites; costs; test content; lab requirements, etc.)

# Definition of IT skills premium pay

- Pay that IT workers receive for possessing high-value IT and business skills used on the job
- Given in the form of a bonus, or embedded in base salary to adjust for the presence of a dominant vendor or technology central to job performance (examples: Cisco Network Engineer, Python Software Engineer, Redhat Linux Systems Administrator, or SAP Developer.)
- Often used to adjust either base pay or total pay in situations where job title does not match actual on-the-job duties and responsibilities, and changing the job title is not an attractive option
- May be used as a reward, recruiting inducement, retention tool, or as a guide for creating consulting rate cards

# ABOUT THIS RESEARCH

Foote Partners' primary research survey for tracking IT skills and certifications pay and supply/demand volatility is the industry-leading *IT Skills and Certifications Pay Index™* (ITSCPI), launched in 1999, and the *IT Skills and Certifications Volatility Index*, both updated every three months for the past 20 year. Data covering 430,338 tech professionals at 4,391 employers in 83 U.S. and Canada cities are reported for IT salaries and skills pay earned for 270 positions and 1,340 certified and noncertified technical and business skills. Verified and validated pay data for 97,773 tech workers has been included in the 1st Quarter 2024 data edition of the ITSCPI, compiled from data collected through April 1, 2024.

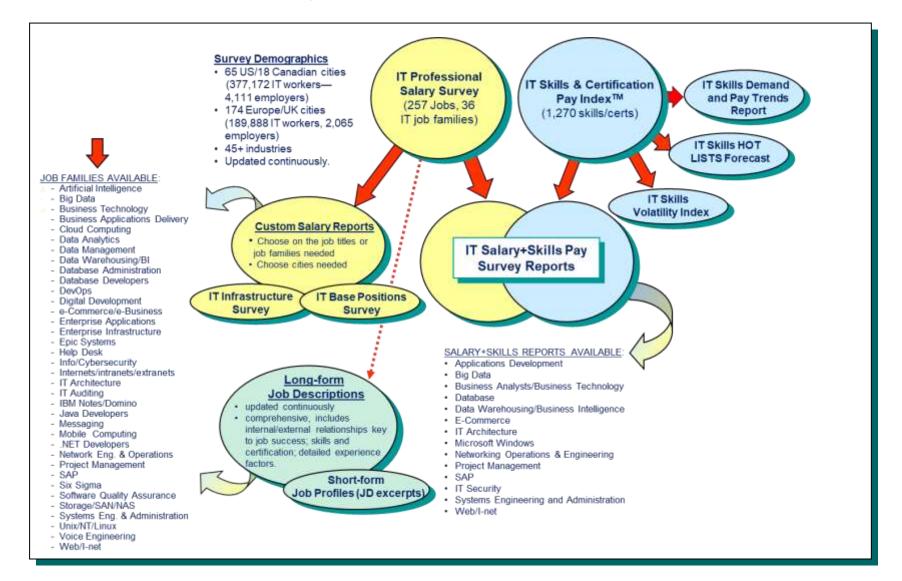
Demographics of the participating organizations for our latest update are as follows, measured most appropriately for the type of business, by revenues, assets, total premiums and operating budgets:

- 18% of participating organizations have \$5 billion+ in sales/\$15+ billion in total assets
- 28% of participating organizations earn more than \$1 billion in annual revenues or more than \$5 billion in total assets
- 46% of participating organizations have \$500+ million in sales/\$1+ billion in total assets/\$500+ million in premiums/\$500+ million operating budget (government, educational, not-for-profit)
- 54% of participating organizations fall in the SMB (small-to-medium sized business) segment, generally defined as
  organization under \$500 million in sales.
- [Public sector] 5% have operating budgets of \$500 million or more, [nonprofit/educational sectors] 4% with operating budgets \$100 million to less than \$500 million

# TO OBTAIN A COPY OF THE LATEST IT SKILLS AND CERTIFICATIONS PAY INDEX™

Please visit the Foote Partners web site: IT Skills and Certifications Pay Index

# Foote Partners 2023 IT Compensation Survey Product Map



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# **ABOUT FOOTE PARTNERS**

Foote Partners, LLC is a technology analyst firm and independent benchmark research organization focusing on the people (versus vendor) side of managing technology and technology value creation. A thought leader and trusted advisor to thousands of employers on five continents who purchase our products and services, our company provides pragmatic benchmark research and forward-thinking advice and market intelligence targeting the tech workforce in the modern highly integrated business/IT hybrid environment in which all private and public organizations now operate.

Our products are deeply grounded in specialized proprietary data-driven statistical and empirical research, benchmark surveys, and business intelligence collected from thousands of North American employers with whom we have deep longstanding research partnerships. These partnerships have been created and supported specifically to enable unique market intelligence views and difficult-to-find decision support research on the multiple facets of IT human capital management. As a group, these U.S., Canadian, and European partners were selected to meet strict criteria for what we believe is the most meaningful demographic representation for tech professionals in each local labor markets.

Founded in 1997 and comprised of former Gartner industry analysts, McKinsey & Company, Mercer and WillisTowersWatson senior consultants, and former corporate HR, IT, and business executives, the firm's research division publishes 70+ quarterlyupdated benchmarking, analytical research and forecasting products that help employers benchmark their IT compensation, solve difficult information technology management and workforce problems, and strengthen their ability to execute complex business solutions.

Foote Partners tech compensation survey findings and labor market trend analyses are featured regularly in countless business, HR, and IT media sources and periodicals around the globe, including *Bloomberg BusinessWeek, Forbes, Fortune, Wall Street Journal, New York Times, CIO Magazine, ComputerWorld,* and WorldatWork's *Journal* and *Workspan Magazine*; and in appearances on network and cable television, National Public Radio, and countless podcasts and webcasts.

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