Long-Form Job Descriptions Samples

2018 Revised Edition

Foote Partners, LLC
Foote Research Group

Job Titles Surveyed – 2018 IT Professional Salary Survey

A. TECH INFRASTRUCTURE POSITIONS

Systems Operations
- Vice President–Systems and Networks
- Director– Systems and Networks
- Manager–Operation Services (NT/Unix/Linux)
- Sr. Systems Administrator–Transaction Monitors
- Systems Administrator–Transaction Monitors
- PC Desktop Technician

Network Operations
- Director – Network Operations
- Manager-Network Operations
- Sr. Network Technician
- Network Technician
- Sr. Network Administrator
- Network Administrator

Systems Engineering
- Director–Systems Engineering
- Manager--Systems Engineering
- Sr. Systems Engineer
- Systems Engineer

Network Engineering
- Director — Network Engineering
- Manager — Network Engineering
- Sr. Network Engineer
- Network Engineer

Info/Cyber Security
- Vice President, Information Security
- Director, Information Security
- Manager, Information Security
- Security Architect
- Sr./midlevel Information Security Analysts
- Sr./midlevel Security Administrators
- Sr./midlevel Cyber Security Specialists
- Sr./midlevel Cyber Security Analysts (2018)
- Sr./midlevel Cyber Security Engineers (2018)

Enterprise Infrastructure Management
- Vice President/Director - Enterprise Infrastructure
- Manager, Enterprise Infrastructure
- Sr. Infrastructure Engineer/Integrator
- Infrastructure Engineer/ Integrator

Enterprise Messaging Management
- Director – Enterprise Messaging Systems
- Sr. Messaging Engineer
- Messaging Engineer

Storage/SAN Administration
- Sr. Storage/SAN Administrator
- Storage Administrator

Voice Engineer
- Manager, Voice Engineering
- Sr. Voice Engineer
- Voice Engineer
- Associate Voice Engineer

Database Administration
- Manager, Database Administration
- Sr. Database Administrator
- Database Administrator
- Sr. Systems Programmer – DBMS

Database Developer
- Sr. Database Developer
- Database Developer
- Associate Database Developer

B. APPLICATIONS DEVELOPMENT POSITIONS
Business Application Development
- VP(Director), Corporate Applications
- VP(Director), Business Unit Applications
- Manager, Business Applications Development
- Sr. Business Applications Developer
- Business Applications Developer

Java Developers
- Sr. Java Developer
- Java Developer
- Associate Java Developer

.NET Developers
- Manager, .NET Development
- Sr. .NET Developer
- .NET Developer
- Associate .NET Developer

DevOps Engineers
- Lead DevOps Engineer
- Sr. DevOps Engineer
- DevOps Engineer

Software Quality Assurance(SQA) Engineers
- Manager, SQA Engineering
- Lead SQA Engineer
- Sr. SQA Engineer
- SQA Engineer

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Job Titles Surveyed – 2018 IT Professional Salary Survey, cont'd.

C. TECH COMPUTING PLATFORMS

Mobile Computing
- Manager, Mobile Applications
- Lead Mobile Applications Developer
- Sr. Mobile Applications Developer
- Mobile Applications Developer
- Sr. Mobility Architect
- Mobility Architect

Cloud Computing
- Sr. Cloud Architect
- Cloud Architect
- Sr. Cloud Developer
- Cloud Developer
- Sr. Cloud Engineer
- Cloud Engineer

Big Data
- Sr. Data Scientist
- Data Scientist
- Sr. Data Analyst
- Data Analyst
- Sr. Data Modeler
- Data Modeler

Digital Product Development
- Lead UX/UI Designer
- Sr. UX/UI Designer
- UX/UI Designer
- Sr. Scrum Master
- Scrum Master
- Director, Digital Strategy/Content (coming 2018)
- Manager, Digital Analytics (2018)
- Digital Product Manager (2018)
- Digital Product Lead (2018)
- Digital Product Designer (2018)
- Digital Product Analyst (2018)
- Digital Project Manager (2018)

D. ARCHITECTURE, BUS. SYSTEMS ANALYST/TECHS,E-COMMERCE

IT Architecture *(see other families for more architect positions)*
- VP, IT Architecture
- Director, IT Architecture
- Director, Applications Systems Architecture
- Manager, Applications Systems Architecture

IT Architecture – cont'd
- Sr. Applications Systems Architect
- Applications Systems Architect
- Information Architect
- Sr. Data Architect
- Data Architect
- Sr. Enterprise Architect
- Enterprise Architect

Business Systems Analysts
- Manager, Business Systems Analysis
- Sr. Business Systems Analyst
- Business Systems Analyst
- Associate Business Systems Analyst

Business Technology
- Vice President, Business Technology
- Director, Business Technology
- Manager, Business Technology
- Sr. Business Technology Consultant
- Business Technology Consultant

eCommerce/eBusiness
- Vice President, E-Commerce
- Director, E-Commerce
- E-Commerce Project Manager
- Sr. E-Commerce Programmer
- E-Commerce Programmer

E. SAP FAMILY

- Vice President, SAP Program Management
- SAP Project Manager
- SAP Master Data Manager
- SAP Design Architect
- Sr. SAP Business Analyst
- SAP Business Analyst
- SAP Functional Analyst (SME)
- Sr. SAP Configuration Analyst
- SAP Configuration Analyst
- Sr, SAP Security Administrator
- Sr. BASIS Administrator
- BASIS Administrator
- Associate BASIS Administrator
- Sr. ABAP Developer
- ABAP Developer
- Associate ABAP Developer

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Job Titles Surveyed – 2017 IT Professional Salary Survey, cont'd.

F. HELP DESK

- Help Desk Manager
- Sr. Help Desk Specialist
- Help Desk Specialist
- Associate Help Desk Specialist

G. SIX SIGMA
- Master Black Belt
- Black Belt

H. WEB SYSTEMS

- Director, Web Systems
- Manager, Web Systems
- Web Analytics Manager
- Web Project Manager
- Web Security Manager
- Web Architect
- Sr. Web Designer/Site Builder
- Web Designer/Site Builder
- Webmaster — Technical
- Sr. Web Engineer
- Web Engineer
- Sr. Web Developer
- Web Developer
- Web Site Administrator
- Web Customer Support Specialist

I. DATA WAREHOUSING/BUSINESS INTELLIGENCE
VP (Director), Data Warehousing/Business Intelligence
- Data Warehouse/BI Project Manager — Processing
- Data Warehouse/BI Project Manager — Decision Support Services
- Data Warehouse/BI Information Security Manager
- Sr. Data Warehouse/BI Architect
- Data Warehouse/BI Architect
- Sr. Data Warehouse/BI Engineer
- Data Warehouse/BI Engineer
- Sr. Data Warehouse/BI Developer
- Data Warehouse/BI Developer
- Data Warehouse/BI Auditor
- Sr. Data Warehouse Analyst
- Data Warehouse Analyst
- Sr. DSS/BI Engineer
- DSS/BI Engineer
- Data Warehouse/BI Administrator
- Data Warehouse/BI Management Specialist

J. IBM NOTES/DOMINO POSITIONS

- Director, Notes/Domino Group
- Notes/Domino Project Manager - Server/ Network
- Notes/Domino Project Manager - Client/Customer Support
- Notes/Domino Architect
- Sr. Notes/Domino Engineer - Server/ Network
- Sr. Notes/Domino Engineer - Client/Customer Support
- Notes/Domino Developer/Programmer
- Notes/Domino Information Security Manager
- Sr. Notes/Domino Analyst
- Notes/Domino Administrator
- Notes/Domino Quality Assurance Auditor

K. EPIC SYSTEMS (healthcare software/ EMR)
(Note: This job family not included in *IT Professional Salary Survey*)

- Epic Program Director
- Sr. Epic Project Manager
- Epic Project Manager
- Sr. Epic Clinical Systems Analyst
- Epic Clinical Systems Analyst
- Sr. EpicCare Ambulatory Analyst
- EpicCare Ambulatory Analyst
- EpicCare Ambulatory Applications Builder
- Sr. Epic Bridges Interface Analyst
- Epic Bridges Interface Analyst
- Sr. Epic Clarity Report Writer
- Epic Clarity Report Writer
- Sr. Epic Cadence Applications Analyst
- Epic Cadence Applications Analyst
- Sr. Epic OpTime Application Analyst
- Epic Optime Application Analyst
- Sr. Epic Resolute Professional Billing
- Epic Resolute Hospital Billing
- Epic Training Manager
- Epic Principal Trainer
- Epic Trainer

Sample Job Descriptions*

- Data Architect

- Data Scientist

- Sr. UX/UI Designer

- Scrum Master

- E-Commerce Programmer

- Sr. Epic Clinical Systems Analyst

- SAP Configuration Analyst

* Base salary and bonus data are available from Foote Partners for
209 job titles in each of 65 U.S. and 18 Canadian cities. All data is updated
and published every 3 months.

Data Architect

The Data Architect is responsible for ensuring that the data assets of an organization are supported by an architecture supporting the organization in achieving its strategic goals. The architecture should cover databases, data integration and the means to get to the data. Usually the data architect achieves his/her goals via setting enterprise data standards.

Responsible for evaluating the use of data and relating data directly to the goals and practices of the company. Establishes consensus and a road map for moving forward to optimize the utility of data from multiple disparate sources. Participates on a team that is defining the overall data policy, standards, and best practices for the enterprise. Ensures the accuracy and accessibility of all important data and is responsible for knowing what data is important and why. Assists in the creation and maintenance of the enterprise data model. Responsible for the documentation of relevant data through the sound use of data modeling techniques and practices as well creating and managing meta-data.

The Data Architect assists in overseeing the development of data models across the organization to ensure adherence to sound data management principles and where possible, the reuse of data. Helps define and manage master data for the enterprise. Assists in overseeing the development of complex data models and logical database design and develops policies, standards and procedures related to the database environment.

Responsibilities

- Develop and drive acceptance of an enterprise view of data and its use across the enterprise. Direct and ensure a common vocabulary and understanding of business entities and relationships between entities,
- Provide thought leadership for definition/maintenance of complex enterprise data models, data dictionaries, and master data management techniques.
- Develop and document data requirements and design specifications in the form of data models, data mappings and data quality metrics. Map out structure and organization of the relevant data for the company or project within the company.
- Participate in identifying and defining business drivers, goals, and information needs.
- Develop, improve, and support enterprise data standards and data architecture policies and procedures. Monitor and enforce compliance of data standards to minimize data redundancies and enhance information quality throughout the organization. Implement and document the company data architecture and data strategy.
- Govern conformance of the use of data in new technology solutions to the enterprise data model and usage policies and standards.
- Deliver conceptual and logical solution designs for specific applications or suites of applications within a conceptual (CSA) and logical (LSA) solution architecture for a set of business requirements that defines how the needs of an entire project/program impact the applications.
- Lead the analysis, design, development & implementation of logical data models; physical database objects; data conversion, integration, and loading processes; query and reporting functions; data management and governance; and data quality assurance processes

- Assists in developing enterprise-level strategies and principles for the integration of enterprise information resources by helping to define standards for data format, quality, and database design. Build and maintain the enterprise information model and ensure linkages to other architecture models and reference architectures
- Assist in maintaining and enhancing the metadata infrastructure (metadata repository, model repository); the data dictionary and business metadata, and facilitate publishing the information to the business and technical communities. Create business rules for the use of data
- Provide support and consulting to project leaders for new projects on data standards, data naming conventions, data sourcing, data feeds and logical database design, to ensure that new applications and data stores integrate with overall enterprise and data architectures. Review and sign off on all project data models.
- Communicate and educate others on the use of sound data management principles. Interact daily with Business Analysts and project teams.
- Work with the data integration groups and process analysts to: obtain and document data flow diagrams (DFD) and data mappings. Advises and guides data modelers in solution delivery teams for modeling standards and best practices. Maintain an inventory of all the "data stores" in the organization
- Understand and employ best practices for relational and multidimensional database design and understands appropriate application for each. Develop and implements plans to oversee the database administration function, and ensures smooth transition to new technology
- Provide source to target ETL requirements and work with ETL Developers to ensure efficient transformation and loading.
- Design, develop, test and implement automated extract, transformation and load routines using tools such as: SQL, PL/SQL, and SSIS. Direct the pesearch and evaluation of new tools and techniques and management and maintenance of related tools and environments.
- Assist in the definition and implementation of system backup, recovery, and support plans. Perform required system maintenance.
- Coordinate and ensure data security administration, backup and recovery planning, capacity planning, performance and tuning
- Undertake complex projects requiring additional specialized technical knowledge. Make well-thought-out decisions on complex or ambiguous IT architecture issues. Coordinates with users to determine requirements.
- Monitors project schedules
- Ensures that system improvements are successfully implemented and monitored to increase efficiency.
- Acts as a resource for direction, training and guidance for less experienced staff. Conduct internal training on data architecture concepts.
- Lead definition of relevant business data
- Lead projects that are intended to support business decision support requirements. Manage realistic expectations of the customer by prioritization
- Coordinate specific database performance monitoring and tuning tasks including the design of optimization and indexing schemes
- Maintain an advanced understanding of industry application development methodologies, tools and techniques
- Help coordinate with central IT staff to plan, manage, maintain, mature and tune hardware and software environments

Skills and Knowledge

- Applies specialized knowledge of one or more areas of business process, information technology solutions (e.g. OMNI/Peoplesoft/Siebel) and an understanding of data modeling principles and methods to drive technology optimization and architecture recommendations.
- Solid understanding of data modeling techniques to drive technology optimization, data consolidation and technology strategy recommendations.
- Knowledge of enterprise architecture functioning for driving data and information related governance and strategy in the organization and
- Highly skilled in developing data architectures and standards.
- Knowledge of data management, data quality, data management with in-depth expertise of data optimization strategy.
- Demonstrated strong skills: data analysis and profiling; data integration knowledge; database engineering (e.g., DB2 and SQL Server) and design.
- Strong understanding of OLTP and decision support concepts and their implications to data modeling and database design
- Proven analytical skills to properly evaluate and interpret cross-functional data standardization requirements
- Ability to resolve complex issues relate to enterprise wide data architecture concerns
- Ability to architect data management enterprise solutions that are in alignment with strategic technology roadmap and emerging industry trends
- Experience in computer systems validation and software quality assurance highly desirable
- Understands, supports, and follows department standards and methodologies
- Understands and implements security requirements within a heterogeneous database and business environment
- Familiarity with process improvement frameworks such as the SEI CMMI
- Master data hub architecture, data design and implementation
- Metadata management, design and integration
- Data warehouse architecture, data mining, data design and implementation,
- ERP data architecture
- Knowledge of functions and processes of the relevant industry organization.
- Management style that exhibits high energy, strategic thinking, collaboration, direct communication and results orientation
- Effective in matrix management and team building
- Poise, maturity and communication skills necessary to represent the data architecture group internally and externally. Strong presentation, verbal and written communications skills

Experience

- Bachelors or higher-level business degree with mathematics, statistics, Information Management or data analytics focus.
- 8 years of previous experience in data base management, including an in-depth knowledge of mainframe, client server, network and workstation technologies, and their interdependence

- 4+ years experience in an IT or quantitative business area with solid demonstrated experience in data architecture, integrating and analyzing disparate data sources, and data quality improvement, preferably in the insurance or financial services industry.
- Experience playing a leadership role in enterprise-wide Data Quality Management, Data Resource Management, Data Stewardship and/or Data Administration programs at a company or similar size.
- Excellent analytical and problem solving skills.
- Strong understanding of SDLC and architectural methodologies and frameworks and their practical application. Has an advanced understanding and vision of the complete lifecycle of database, data warehouse and data mart development
- Hands-on experience with evaluating and implementing data quality metrics on both relational and legacy (flat file) systems. Knowledge of accounting and audit principles, Sarbanes-Oxley and/or the Model Audit Rule a plus.
- Proficient with a data modeling tool(s) (e.g., Computer Associates ERWIN, MS VISIO, IBM Rational Data Architect, IBM M1 tool).
- Experience with many of the following:
  - COBOL
  - COGNOS
  - Data Quality Tools (IBM Quality Stage, Information Analyzer)
  - ETL tools (Informatica PowerCenter, IBM DataStage, etc.)
  - File management and reporting utilities
  - IDMS
  - IGrafX
  - Informatica
  - Metadata Tools (SAG's Rochade and BeCubic, IBM's Metadata Server, Metadata Workbench, Business Glossary)
  - MS Powerpoint, MS Access, MS Excel
  - Oracle
  - RDBMS (Oracle, SQL Server, Teradata)
  - Siebel, OMNI, Peoplesoft, Adabase IBM WCC
  - SQL
  - SQL Developer
  - Sybase
  - Unix
  - XML

- Highly desirable certifications for this position may include the following:
  - AWS Certified Solutions Architect - Associate (Cloud)
  - AWS Certified Solutions Architect - Professional (Cloud)
  - Certified Cloud Architect
  - Certified IT Architect (IASA CITA)
  - Certified Technical Architect (Salesforce.com)
  - Check Point Certified Master Architect (CCMA)
  - Cisco Certified Architect
  - EC Council Certified Network Defense Architect Certification
  - EMC Cloud Architect Associate
  - EMC Cloud Architect Expert
  - EMC Cloud Architect Specialist
  - EMC Technology Architect – Expert
  - EMC Technology Architect – Specialist
  - EMC Data Center Architect (EMCDCA - all versions)
  - HP ASE Cloud Architect V2

- HP ASE - Data Center and Cloud Architect V2/V3
- HP ASE - Storage Solutions Architect V1 /V2
- HP Master ASE - Storage Solutions Architect V1/V2
- IBM Certified Infrastructure Systems Architect
- IBM Certified Solution Architect – Cloud Computing Infrastructure V1
- InfoSys Security Architecture Professional (ISSAP/CISSP)
- Microsoft Certified Solutions Expert: Data Management and Analytics
- Open Group Certified Architect
- Open Group Master Architect
- Oracle Certified Master, Java EE Enterprise Architect
- Oracle SOA Infrastructure Implementation Certified Expert
- PMI Project Management Professional (PMP)
- Red Hat Certified Architect (RHCA)
- Red Hat Certified Architect: Cloud
- Salesforce.com Certified Technical Architect
- Security Certified Network Architect (SCNA)
- SNIA Certified Storage Architect
- TIBCO Certified Architect
- TOGAF 9 Certified

- Direct experience in enterprise data warehouse architecture and development is usually desirable.
- Possess a strong sense of customer service and consistently and effectively addresses customer needs
- Ability to facilitate in requirements gathering sessions.
- Has experience with and understands how best to apply agile or iterative development techniques
- Capable of being an individual contributor and working as part of a team.
- Proactive personality with a proven track record of delivering on responsibilities and tasks. Highly adaptive with an ability to organize, coordinate, and execute on details.
- Has the ability to manage large projects and mentor junior team members
- Strong communication skills (verbal and written) with an ability to work in a highly collaborative environment and build successful relationships across the organization. Must be able to articulate the impact of data quality and architecture changes in business terms.
- People/facilitation skills - excellent at expectations management, obtaining buy-in/consensus, negotiating solutions, resolving conflict
- Performs work with minimal supervisory direction
- Demonstrated communication and presentation skills for strategic and optimization recommendations
- Analyze and solve poorly defined or ambiguous problems
- Strong interpersonal and communications skills for interacting with team members and business subject matter experts

Working Relationships

Internal:
- Reports to director- or manager-level architecture positions or equivalent. May supervise senior developers, systems administrators, technical specialists, and business technologists, and manage the performance of consultants and service providers
- Has close working relationship with the architecture team and peers in other areas of IT

External:
- Has regular contact with outside vendors and contractors/consultants for additional support as needed
- Develops relationships with professional organizations, user groups, and industry trade groups to stay current with technology
- Interfaces with vendors on technology and support issues

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Data Scientist

Data Scientists are responsible for gathering, cleaning, managing, and exploring a large amount of disparate data in order to: make predictions, build data models and algorithms, test hypotheses, and communicate the results. They are responsible for generating evidence-based insights that can be communicated in a visual and storytelling fashion in order to aid the business in decision making.

They are responsible for modeling complex problems, discovering insights, and identifying opportunities through the use of statistical, algorithmic, mining and visualization techniques with statistical modeling packages typically in a large-scale, distributed data system. As part of an enterprise analytics team, this position is responsible for building predictive models for a variety of possible applications areas as assigned based on their knowledge and experience, using unstructured data sources in combination with traditional structured data sources

Data Scientists are well versed in statistics, mathematics, economics, programming, and has a solid business focused background and acumen. They ideally have experience pulling data from multiple data sources and doing in depth analysis, as well as experience with financial analytics and statistical modeling and Big Data technologies. They identify opportunities to expand the business impact from data analytics through the use of big data. They also recommend and manage new technologies, processes, and methodologies, and collaborate with other Data Scientists.

Data Scientists have a passion for algorithms and an excellent foundation in probability theory, estimation/classification methods, and a general understanding of machine learning/data mining concepts. They must be a solid team player who is inquisitive, creative, adaptable, tenacious, and a solid communicator who understands their audience. Employers generally seek out Data Scientists who are driven to improve business processes, functions, products, and delivery to customers.

Duties and Responsibilities

- Use a variety of parametric and non-parametric modeling techniques grounded in a broad theoretical understanding of probability and statistics in order to create appropriate and well-specified models that support business insight.
- Translate business needs into an efficient and effective analysis plan, performing and managing execution of analysis, and translating findings into insight in an effort to ensure adoption and business integration.
- Develop analytical methodologies and specify data requirements by translating business phenomena into appropriate mathematical/regression equations.
- Build and refine predictive models which may incorporate methods for regression, classification, text/pattern recognition, probabilistic/graphical models, streaming, and time series analysis. Apply rigorous validation methods to models and provide realistic expectations of model performance when it is generalized to new data (e.g. confidence intervals).
- Apply data mining techniques to explore data, develop analysis to support strategies that help lines of business. Conduct exploratory data analysis.

- Develop and translate algorithms (graph theory, recursion, etc) into working prototype code
- Identify trends in large data sets and validate expected and unexpected trends in the data to assist in identifying solutions to resolve the unexpected.
- Participate in research efforts for building probabilistic models for next generation sequencing platforms. Leverage accurate probability models to build the next round of algorithms and products.
- Identify relevant internal and external data. Identify areas where missing data could be deemed useful in providing business insights.
- Develop strategies to extract, resolve and unify information of various types from numerous disparate data sources. Obtain, clean, and manage large, fast moving disparate data sets.
- Use interpreted / runtime languages like Python, C# to develop scripts for data pipelines. Perform queries, aggregations, joins, and transformations using Spark, Hive, Pig and related tools. Be a versatile back-end developer with experience extracting, transforming and loading (ETL) structured and unstructured data.
- Develop analytical macros and applications via code or GUI interface that provide business insight
- Clearly communicate insights discovered from models in a manner which is easily interpretable by general business users. Produce ad hoc, as well as ongoing reports, graphs, charts, tables, and other visualizations. Create and lead presentations.
- Ensure that accurate and thorough documentation is maintained for any programming code, application, macro, or business process. Drive rigorous data analysis effort and support group efforts toward high quality documentation.
- Partner and collaborate with business teams and subject matter experts to provide data and analytics, identifying new sources of data, data analysis and overall project strategy support as needed.
- Participate as a member or a lead on multi-function teams and project planning activities, helps to ensure that projects are completed in a timely and cost effective manner. Make decisions and recommendations on project priorities, functional design changes, process improvements and problem resolution.
- Research and recommend data science best practices.
- Demonstrate strong understanding of agile delivery.
- Deliver value by creating functions, classes, and packages to automate processes and workflows for production deployment.
- Educate others on predictive analytic and statistical based data science techniques.
- Aggressively and continuously advance skill set.

Skills and Knowledge

- Core skills in computer science: data structures, algorithms, programming paradigms and relational databases. Understands the limitations of these algorithms and how to tweak them or derive from them to achieve similar results at large-scale
- Core skills in statistics: Descriptive and Inferential Statistics. Solid understanding of Frequentist Statistics is highly desirable
- Possesses a working knowledge of shell scripting and regular expressions; Python and Strata experience is a plus.
- Is familiar with the principles of literate statistical programming.
- Ability to use data and analytical skills to find and interpret rich data sources.

- Can work by exploratory analysis and rapid iteration; has an innate curiosity about the data that leads her/him to extend analyses, where appropriate, and to provide additional insight to the client that was not specified in the original request.
- Cloud computing services such as Amazon AWS, Microsoft Azure or Google Cloud Platform.
- Provable and hands-on experience in Machine Learning (professional projects, coursework, quantitative studies, etc.). At least one of the following: Linear/Logistic Regression, Decision Trees, Neural Networks, Support Vector Machines, K-means, Principal Component Analysis, TF-IDF.
- A good understanding of the various machine learning approaches and algorithms for each of the following areas: Clustering, Recommendation, Classification
- At least one the following programming languages and software and disposition to learn any of the rest: C#, C++, Java, Python, R, Scala, Matlab, Octave
- Understanding of Big Data platforms, frameworks and programming models like Hadoop, MapReduce, Hive, Spark. Experience working with SQL, NoSQL, Pandas, Pig etc.
- Source control tools: BitBucket, GitHub
- Experience developing data products using Shiny or Python and data visualization tools like SAS VA, Qlikview, and Tableau is highly desirable.
- Highly skilled in Calculus and Linear Algebra
- Strong knowledge of probability theory and estimation/classification methods.
- Experienced with mathematical modeling for any systems
- Well-versed in the current analytics landscapes
- Excellent predictive modeling skills
- Experience with other statistical modeling packages
- Anti-fraud experience is a big plus
- Can create visualizations to aid in understanding data
- Possesses intangible aspects such as:
  - *Intellectual Curiosity and Critical Thinking* (necessary to analyze a problem from multiple perspectives and examine the interrelationships between data that may appear superficially unrelated).
  - *Learning Agility* (open to new ways of thinking and acquiring new skills to retain a competitive advantage
  - *Creativity* (to invent and try new approaches to solving a problem).
  - *Technical Focus* (to design and test a technique over days and weeks, find it doesn't work, learn from the failure, and try again).
  - *Customer Focus* (passionate about delighting customers and offering unique solutions that exceed expectations)
  - *Attention to Detail* (in order to maintain rigor and to detect and avoid over-reliance on intuition when examining data)
  - *Clear and concise written and oral communication*.
  - *Interpersonal skills* (necessary to build good working relationships and work as part of a team)
- Highly desirable soft skills for this position include:
  - naturally inquisitive
  - detail oriented
  - takes ownership of work
  - works collaboratively to solve problems

Experience

- Bachelor's or master's degree in Computer Science, Statistics, Mathematics, Analytics, Data Science, Economics, or related discipline is required. PhD is desirable.
- 3+ years of hands-on data science experience performing analytics, data mining methods and modeling techniques leveraging statistical models and visual analytics. Proven ability to apply mathematical principles to solve real estimation problems and implement practical solutions.
- 2+ years experience in one or more modeling platforms/programming languages, such as R, SAS, SPSS, and Python
- Experience deploying data science solutions to the business environment
- In-depth knowledge and experience selecting and applying appropriate data analytics algorithms such as decision trees, regression methods, stochastic models, neural networks, and time series analyses
- Excellent foundation in probability theory and estimation/classification methods
- Provable and hands-on experience deploying Machine Learning techniques on an enterprise-scale. At least one of the following: Linear/Logistic Regression, Decision Trees, Neural Networks, Support Vector Machines, K-means, Principal Component Analysis, TF-IDF.
- At least one the following programming languages and software and disposition to learn any of the rest: C#, C++, Java, Python, R, Scala, Matlab, Octave
- Strong understanding of relational and dimensional data models and the ability to move data around from a database or an API, through transformations, a model and into readable or visual form.
- Ability to blend quantitative and analytical skills, problem solving and strategy consulting with a strong bias to action.
- Demonstrated experience with Big Data concepts and technologies (i.e. Hadoop, Map Reduce, Spark, Hive, HDFS, Cassandra, Mongo, Pig, and NoSQL)
- Knowledge of analytical and visualization tools, such as Alteryx and Tableau
- Solid experience in the following techniques:
  - Classification (e.g. Decision Trees and Support Vector Machine),
  - Regression (i.e. Linear and Nonlinear),
  - Clustering (e.g. K-means, and Fuzzy),
  - Time-series modeling and forecasting (e.g. ARIMA, GARCH, and Exponential Smoothing),
  - Statistical Analysis (e.g. Hierarchical Modeling and Hypothesis Testing)
- Experience with predictive and prescriptive analytics
- Requires analytical ability, creativity and judgment in analyzing, developing and implementing software solutions
- Experience participating in Agile/SCRUM projects. Able to work in teams, fostering a collaborative environment
- Experience developing reports, models, applications, and presentations
- Excellent communication skills with scientists, engineers, and non-technical audiences. Strong proven written and oral communication skills including the ability to convey complex issues to senior managers in a simple and straight forward manner
- Team player with emphasis on knowledge sharing and demonstrated ability to manage multiple assignments simultaneously.

- Highly desirable certifications for this position may include the following:
    - Cloudera Certified Professional: Data Scientist
    - EMC Data Science Associate
    - EMC Data Science Specialist, Advanced Analytics
    - SAS Certified Data Scientist

Sample

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Foote Research Group

Sr. UX/UI Designer

The UX/UI Designer is responsible for performing a senior level role in the research and design efforts for customer and user-facing systems and communications, as well as work collaboratively and in a mentorship capacity with more junior UX designers. This position will work directly with clients and project teams to develop strategies and design specifications that will improve the performance, usability and effectiveness of customer facing interfaces.

The successful designer brings solid experience in linking business and financial objectives (higher conversion rates, higher retention rates, etc.) with good design aesthetics and an outstanding user experience. The ideal incumbent in this role is an empathic end-user advocate capable of identifying and translating user requirements into design solutions for hardware/software systems through the use of a structured design process and methodology. This individual should have experience researching and documenting common use cases as a means of establishing systems requirements. In addition, this designer should have a thorough understanding of current UX/UI trends and contemporary user-centered design methodologies, from initial generative research to evaluative testing of developmental interfaces.

As a primary liaison between Marketing and Systems Engineering this role is expected to be central to guiding the creation of hardware/software systems from requirements development through implementation and testing.

Responsibilities

- Designing innovative and effective interfaces for existing and new user interactions.
- Focused on defining and building next generation User experiences for employees and its customers. Provide creative direction and design for projects ranging from new products to enhancing existing solutions. Develop and execute UX plans as an integral part of design and development processes, driving the design of scenarios from initial conception through final implementation.
- Responsible for user interface design and workflow including: reviewing prioritized product and customer requirements, defining personas, documenting use cases, converting requirements into user interface designs, detailed wireframes and prototypes, and working closely with product managers and engineers to ensure designs and workflows are correctly built, tested and deployed into the product. Create attractive, compelling designs while maintaining visual consistency and brand identity
- Perform cognitive task analysis, use-in-context research, heuristic reviews, conduct user studies and work closely with domain experts, product management and development teams
- Skilled at developing strategy, defining UX foundations, communicating ideas, and guiding UX design and research and capabilities that will be used across all of solution portfolio
- Initiate usability studies and surveys set objectives, running test sessions, interpreting results and reviewing findings with team members. Aggressively respond to market and usability testing results, using mockups, prototypes, user flows, and detailed design specification documents to define and communicate interface concepts and requirements, ensuring consistency and ease of use for our customers.

- Collaborate with project managers, designers, and a cross-functional client teams including representatives from marketing, product management, engineering, quality assurance, and customer support. Collaborate across product silos
- Ensure that interaction design methods/processes are developed and executed in a manner which supports all quality standards and support and follow established corporate UI standards and guidelines.
- Ensures customer-facing designs and applications meet company business goals, brand standards, accessibility guidelines and legal requirements. Be an interaction design representative for product development on program teams by working with Software Engineering, Product Management, Marketing, Service, and Applications in resolving user requirement, design, and implementation issues to satisfy business needs.
- Create reusable patterns and assets that will enable products to provide harmonious experiences for customers and partners
- Responsible for contributing to a program plan of schedules, specifications and resources for design aspects of a product.
- Identifies, plans and leads improvements to existing digital products and services
- Work collaboratively with many stakeholders and constituents:
  - With leadership to understand and support the overall performance, customer satisfaction and customer value model with digital solutions.
  - With Market Research to design and execute user research studies and usability testing to guide interface design.
  - With other UX Designers and collaboratively with multiple internal partners to understand business and customer needs
  - With DEVOPS teams to translate those needs into brilliantly constructed and efficient software
  - With Web Developers to produce functioning proof-of-concepts and/or production quality interfaces. With product management and engineering management to ensure efficient testing and release of UI designs into the product
  - With business analysts and developers, coaching them in designing great user experiences

Skills and Knowledge

- In-depth understanding of all aspects of interaction/user experience design including generative application research, leading collaborative brainstorming sessions, defining personas, creating detailed wireframes and architecture diagrams, use case development, and conducting evaluative end user testing.
- Demonstrated user interface or interaction design experience for commercially released products with experience in the development of hardware/software systems.
- Solid background in user-centric and end-to-end scenario focused design methodologies and screen designs.
- Experience working closely with business teams and can easily immerse into the development process to deliver high quality, compelling and innovative UX.
- Strong understanding of fundamental design principles (brand, typography, layout, grid systems, hierarchy, color, composition, accessibility and internationalization)
- Experience with creating user stories, doing research, and creating user personas
- Experience in developing and communicating visual specifications and the successful application of reusable design patterns, assets and guidelines across a diverse technology team would be preferred.

- Experience with UI frameworks like DOJO. Practical knowledge of prototyping platforms is required.
- Experience with SaaS or cloud-based platforms Able to translate user research findings into design decisions
- Able to distill and organize large amounts of complex information into simple, useful, and usable application designs
- Experience creating detailed design specifications
- Applying modular and systematic approaches to user experience design
- Designing navigation, interaction and nomenclature systems
- Conducting heuristic analysis and assessments
- Proficiency with rapid prototyping tools such as PhotoShop, Illustrator, Dreamweaver Director/Flash, Visio, etc
- Have an understanding of web technologies used for e-Business operations, enterprise application software, SaaS integrations and real-time data exchange
- Familiarity with HTML, DHTML & Javascript
- Ability to work with business management and leadership in a consultative fashion
- Exceptional communication skills that demonstrate understanding of user needs and translating these needs into simple, creative solutions; ability to justify design choices and adjust decisions based on feedback.
- Solid presentation and negotiation skills along with a passion to deliver great design. Able to build respect and credibility with stakeholders, management peers, and direct reports through mentorship, leading by example, and persuasion.
- Understand business objectives and design applications that achieve them
- Demonstrated ability to meet commitments and multi-task in a fast-paced work environment.
- Demonstrated attention to detail and organization in all aspects of work.
- Ability to mentor or lead other interaction designers or user experience experts.
- Ability to effectively represent the user experience design interests of product development both internally to the organization and externally.
- Ability to schedule work and allocate resources with an emphasis on quality and time to market

Experience

- Bachelor's degree or equivalent experience or a combination of education and experience, preferably in Interaction Design, Human Factors Engineering Visual Design, UX Design, HCI, or related discipline. Work experience a creative department of an agency, design shop, or digital firm is desirable.
- Minimum of 4 years of experience with Human Factors Design and Analysis, UX/XI interface design, and usability with experience in designing usable web-based, mobile and application interfaces, across B2C, B2B, and B2E interfaces. Demonstrated success in creating product designs, including experience working directly with engineering and QA teams on complex informational products or services.
- 2+ years of experience in mobile development.
- Experience with designing new, next-generation UI interfaces based in existing products is desired. Includes preserving existing product features and avoiding disruptive learning curves for existing customers while providing new efficiencies and a more attractive UI presentation.
- Solid understanding of user-centered design principles with the ability to propose design. solutions/wireframes based on best practices and ability to turn high level business requirements into

interactive experiences with attention to detail and craftsmanship. Ability to understand business objectives and functional specifications and be able to apply those to user interface design.

- Strong conceptualization, communication, and drawing/sketchbook skills and ability to create wireframes to communicate interface designs to teams.
- Experience in several of the following design software: Adobe Creative Suite (Photoshop, Illustrator, InDesign, Flash, Dreamweaver), Fireworks, Omnigraffle, Axure RP, Balsamiq Mockups
- Technical experience should preferably include key technologies employed in the solution development such as: HTML5 and CSS; JavaScript; AngularJS; Node.js; ASP.Net; .Net and C#; TFS, MSBuild, JavaScript, jQuery, Objective-C (iOS), Java (Android), C++.
- MVC Frameworks
- Familiarity with Scrum and Agile methodologies desired
- Experience designing for hybrid hardware/software systems is preferred.

Scrum Master

Scrum Masters typically have a hands-on role in managing the implementation of Scrum/Agile methodologies within software development and engineering teams. They improve the Scrum intensity of these teams and coach them to higher levels of maturity at a sustainable pace by ensuring that they adhere to Scrum theory, practices, and rules.

The Scrum Master leads dedicated teams to deliver business functionality through development and quality assurance execution provided by subject matter experts on their teams. Works with Product Managers to ensure timely delivery of prioritized requests generated by the business entities. Consistently mitigates program risks, optimizes resources and program effectiveness, and ensures that delivery commitments are met consistently and aligned with targeted program outcomes.

Scrum Masters have above average communications skills, are well organized and exhibit above average follow-up and follow-through skills. They facilitate discussion, decision making, and conflict resolution. They 'own' outputs: burn down charts, retrospectives, etc. Track and publish velocity and costs and make increasingly accurate related projections. Train developers, QA professionals, product owners, and project managers in the Scrum process. Serve as an organizational authority in the Scrum process. Evangelize and educate Scrum throughout the organization.

This is an advocacy role that helps those outside the Scrum Team understand which of their interactions with the Scrum Teams are helpful and which aren't. Helps change these interactions to maximize the value created by the Scrum Team(s). Incumbents are hands-on self-starters with a combination of an understanding of technology and strong communication skills.

Duties and Responsibilities

- Act as a Scrum Master for one or more Agile teams within a release train/value stream. Provide leadership, direction, and coaching to the team to encourage adoption of good Agile practices
- Assess the Scrum maturity of teams and organizations and coach teams to higher levels of maturity, at a pace that is sustainable and comfortable for the team and organization. Partner with product owners and coach technical teams to ensure they have a thorough understanding of Agile/Scrum
- Establish team level cadence and drive team level ceremonies (e.g. sprint planning, team retrospectives, backlog grooming, etc.) in alignment with established program level cadences. Ensure cross-team coordination and collaboration
- Track and communicate team velocity, burndown, and sprint/release progress
- Liaise between the stakeholders and project teams to ensure user stories/acceptance criteria is clearly defined and understood.
- Work with product owners and the project teams to develop and manage a product backlog. Drive the definition and refinement of the program and team backlogs, assist with planning activities and other program needs as necessary. Uncover and remove impediments for the team(s) and escalate as appropriate. Act as a liaison to assigned program manager and project managers.
- Manage product scope and control scope creep during the development sprints.

- Provide leadership to project teams and partner with QA, technology and business stakeholders. Work with project teams to provide estimates, manage and mitigate project and team risks.
- Report project progress to project sponsors and executive management
- Knowledge transfer and project postmortem for lessons learned and improving best practices
- Take responsibility for managing the Scrum team's dependencies between the program team and third parties, release managers, or other scrum teams.
- Organize and facilitate effective team meetings: stand-ups, sprint planning, retrospectives, backlog grooming, and demos
- Develop and implement communication plans
- Maintain metrics that provide visibility to stakeholders on team-level progress and quality
- Maintain process documentation
- Effective in motivating teams and guiding them through impediments and/or conflict excellent business presentation and facilitation skills, including Agile retrospectives.
- Actively contribute to the company's Agile and Lean Community through participation in the internal Agile Community of Practice and Scrum Master Forums. Coach and mentor internal teams on how to move towards Agile

Skills and Knowledge

- Skilled in iterative development methodologies and continuous delivery practices
- In depth knowledge of and experience with one or more Scrum/Agile frameworks (e.g. Kanban, Lean, SAFe) and common Agile practices and service-oriented environments, including but not limited to User Stories, ATDD, TDD, Continuous Integration, Continuous Testing, Pairing, Automated Testing, and being 'done' at the end of a Sprint
- Ability to apply a wide variety of patterns and techniques to enhance the Scrum framework (for example: Burn down and burn up techniques, various Retrospective formats, team Stand Up patterns, etc.)
- Ability to forecast team budget burn and project budget spend
- Significant experience with release planning and forecasting, aligning delivery expectations with all stakeholders
- Ability to lead sprint planning and retrospective sessions with cross functional team consisting of Developer, Testers, and Business Analyst.
- Understanding of backlog tracking, burn-down metrics, velocity, and task definition
- Understanding of the basic fundamentals of software development processes and procedures
- Understanding of the value of commitments to delivery made by a development team
- Understanding of the value of metrics
- Strong conceptual grasp of the technology; knowledge of client/server architecture, object oriented design/development.
- Strong knowledge of Project Management fundamentals and competency in the project schedule building process
- Conflict Resolution: able to effectively resolve issues in a timely manner
- Facilitative: able to lead and demonstrate value-add principles to a team
- Assertive : able to ensure Agile/Scrum concepts and principles are adhered to, must be able to be a voice of reason and authority, make the tough calls
- Situationally Aware: able to notice differences and issues as they arise and elevate them to management

- Attitude of empowerment: able to lead a team to self-organization
- Attitude of transparency: has a desire to bring disclosure and transparency to the business about development and grow business trust
- Possesses above average written and oral communication and presentation skills and be able to engage personnel at all levels of the organization

Experience

- Bachelor's degree in computer science, engineering or related field or related experience.
- 7 or more years of IT experience with 2-4 years experience on a working Scrum team including coaching/leading Agile teams in the use of Scrum. Prior experience in a Scrum Master role in an Iterative Development environment with the Certified Scrum Master credential is highly desirable.
- 3+ years experience in a development environment (e.g., web, mobile, products) preferably involving cross-functional business stakeholders. Understanding of basic fundamentals of iterative development
- 2+ years experience owning and managing customer expectations, project schedules, budgets, status reporting and change management.
- Experience working with an agile methodology (e.g. Kanban, Lean startup, SAFe) on large scale, technically complex projects. Thorough understanding of agile software development methodologies, values, and procedures. Thorough understanding of the software development lifecycle
- Demonstrated experience working in and leading teams that leverage Test Driven Development and Continuous Integration processes. Understanding of backlog tracking, burndown metrics, velocity, and task definition
- Prior experience using JIRA or similar software for tracking plan an actual statistics from inception through implementation
- Experience with project management fundamentals and competency in the project schedule building process
- Experience with effective conflict negotiation and facilitation skills.
- Highly desirable certifications for this position may include the following:
  - Agile Coaching Certification a plus (CSC, ICP-ACC)
  - Certified Scrum Master (CSM)
  - Certified Scrum Professional (CSP)
  - ICAgile Certified Professional/Expert/Master
  - Lean Methodology Certifications
  - PMI Agile Certified Practitioner (PMI-ACP)
  - PMI Project Management Professional (PMP)
  - Professional Scrum Master level I (PSM I)
  - SAFe Certification(s)
  - Strategyex Certificate

E-Commerce Programmer

The E-Commerce Programmer Analyst is primarily responsible for the design, architecture, development, and maintenance of e-commerce web sites, including requirements analysis, customizations, database changes, screen changes, security definition and workflow. Converts system requirements into logical program designs, code modules and stable application systems.

The mid-level of this position works with a team of technical resources focusing on e-commerce development for a resident software platform (e.g. Oracle ATG). Works with systems managers and engineers, architects, business analysts and quality engineers in a highly collaborative environment to define product features, estimates and deliverables. This person must be able to create and communicate innovative solutions to business issues and processes leveraging their knowledge of the software platform and is responsible for assigning resources to specific application design and development tasks, defect resolution and production application support.

E-Commerce Programmer Analysts should be able to produce architecture/design artifacts (i.e. object models, sequence diagrams, technical documentation) to help others understand and adhere to company coding standards. Commonly uses agile methodology where all roles closely collaborate with one another in order to complete each unit of work, and where development is not complete until all unit testing, code reviews, QA verification, and user acceptance have passed for each website segment. Communication skills and interpersonal skills are a must for this position.

As one of the core full time members of the e-commerce development team, e-commerce programmer analysts are expected to provide technical leadership for offshore teams and contracting team resources. While this is not a supervisor role, incumbents are responsible for ensuring code written by external vendor development resources is meeting company architectural standards and design patterns. As such, this individual plays a major role in vendor and project management

Responsibilities

- Responsible for technical development, implementation, administration and support of global web based e-commerce solutions, using leading edge technologies. Participate in the development and deployment of new web based e-commerce applications to support online commerce initiatives, playing a leading role in the design of new/improved interfaces to/from ecommerce sites.
- Develops new applications and functionality including modifying existing website, micro-sites, and application sites for B2B and B2C web portals. Develop and document functional specifications
- Works with the senior level or lead e-commerce programmer to write and review technical specifications as required, meeting the objectives of functional specifications. Specifically, identifying specific interfaces, methods, parameters, procedures or functions as required.
- Provide e-commerce application design expertise for web application development, database design and maintenance, software architecture, software development lifecycle management and application monitoring for the relevant ecommerce platform(s) (e.g. Oracle ATG). Help architect efficient and scalable software solutions for the e-commerce/marketing web platform.

- Responsible for the software release management of web team projects including packaging for deployment and working with Configuration Management for the release of, and integration of released applications into open web projects.

- Convert system requirements into logical program designs, code modules and stable application systems. Develops technical design documents for software solutions independently.
- Provide production support for e-commerce sites including afterhours support when necessary.
- Participate in the full SDLC (Agile), including requirement analysis, design and implementation , estimations and other aspects of iterative development.
- Perform unit, integration, and system level tests and develops any necessary supporting documentation.
- Develop production application support plans, schedules, and assignments as required. Estimate the level of effort related to technical design, coding, and unit testing.
- Report status to development management and project/systems management.
- Develop specification documents outlining technical requirements with associated solutions.
- Provide technical support for maintenance of existing applications.

- Implement SEO and marketing enhancements as identified

- Participate in the evaluation of new technology,
- Manage project development efforts pertaining to supplier partnership agreements
- Collaborate with Enterprise Architects to design flexible, scalable, maintainable solutions; with business analysts to understand and implement complex business functionality; and with Project Management, and Quality Assurance personnel to ensure successful delivery of solutions. Works with Operations and IT teams to help support the releases the website into production.
- Help manage the integration of other company entities into the existing e-commerce base.
- Serve as liaison to outside web designers/developers; serves as facilitator for in-house web development (as needed).
- Ability to clearly write technical specifications.
- Able to effectively communicate across teams and roles.
- Demonstrable ability to work within a highly collaborative team to deliver projects on time, with high quality, and within budget.

Skills and Knowledge

- Technical expertise and knowledge of web/e-commerce applications development.
- Strong knowledge and use of object-oriented methodologies and frameworks and WebService technologies
- Experience with Continuous Integration and automated testing strategies is a strong plus.
- Documentation of web site designs, installations and technical administrative procedures.
- Software development lifecycle methodologies and discipline
- Ability to thrive in an environment where change is constant, adjusting to constantly evolving requirements and assigned tasks
- Ability to maintain professional business relationships and effectively lead, triage, prioritize and resolve issues that arise in unpredicted situations

- Proficiency in a variety of web programming related technologies and tools including:

Agile	JSON	Spring MVC framework
AJAX	JSP, Servlets	SQL (Oracle and Microsoft)
Apache Tomcat	Magic Draw UML	SQL Designer
ASP	Microsoft Commerce Server	SQL Developer
C#	Microsoft Internet Information Services	SQL Server Reporting Services
ColdFusion	Microsoft Sharepoint	(SSRS)
CSS	MS Visio	Star UML
Eclipse	.Net languages	Toad
HTML5	Object Orientated design, J2EE	UML diagramming
IBM WebSphere	Object Oriented Analysis Oracle ATG	UNIX Shell Script
J2EE/Java code	Oracle WebLogic	Visual Basic,
JavaFX	Oracle E-Business Suite	Web forms and XML
JAXB	Rational Rose	WSDL
JBoss Application Server	Scripting languages	XHTML
JDBC	SCRUM	XML
JMS	SEO implementation and tuning	XSD
JQuery, Java Script	SOAP/REST	

- Ability to use a consultative approach to the needs of suppliers and business units while orchestrating and managing project efforts. Ability to interact effectively with internal and external customers.
- Comfortable working across teams, with good organizational skills, ability to work independently, good communication skills, good negotiation skills, and excellent analytical skills. Must be able to operate within and enhance a team environment.
- Good verbal and written communication skills
- Strong problem solving and analytical skills

Experience

- Bachelor's degree in Computer Science or related disciplines, or equivalent work experience.
- 8 years IT experience developing and implementing business systems on the Web.
- 5 years experience with object oriented applications development in a UNIX or Linux environment, including the e-commerce applications and web applications framework(s) relevant for the specific employer. Includes developing and maintaining enterprise quality applications.
- At least 2 years experience in database technologies in a web-based environment
  - Developing web applications that interface to SQL servers and require analysis and understanding of schema design.
  - Proficiency in database development/design tools, such as SQL Developer, Toad, SQL Designer
  - Experience with database design, data modeling and SQL tuning.
  - Experience writing DDL, packages, procedures, functions and triggers for Oracle version 10g or higher
- Minimum 3 years experience in project management, vendor management, solution definition, and design, as well as strong technical project management skills.
- Experience with open source frameworks such as Spring, Hibernate, iBatis.

- Experience with IBM WebSphere, Apache, Tomcat or JBoss Application Servers.
- Experience using design tools to create UML use case, class diagrams, sequence and architecture diagrams (e.g. MS Visio, Rational Rose, Star UML, Magic Draw UML).
- Experience developing web UIs with AJAX, JSON, jQuery and jQuery UI frameworks, etc.
- Experience using application and testing frameworks (e.g. SpringFramework, NET, MOQ, NUnit).
- Experience with engineering tools such as bug tracking and source code control systems
- Experience working in structured SDLC and Project Management environments including Waterfall, Agile, RAD is highly desirable.
- Experience working with distributed, component-based architectures
- Comfortable working across teams and possess good organizational skills.
- Excellent organization skills, with proven analytical, planning, problem solving and decision making skills. Able to work independently and as part of a team with the ability to manage time and resources to meet assigned deadlines.
- Demonstrated leadership, communication and time management skills
- Strong relationship and communication skills both written and verbal with the ability to communicate using non-technical jargon. Solid negotiation skills and excellent analytical skills

Working Relationships

Internal:
- Reports to an e-commerce manager and possible a director in smaller enterprise
- Works directly with all areas in IT, with close working relationship with IT peer group.
- Has regular contact with the user community.

External:
- Has frequent contact with outside vendors, contractors/consultants, and industry trade groups.
- May have interaction with media as technology expert.
- Attends conferences and belongs to professional organizations and user groups.

Sr. Epic Clinical Systems Analyst

This position is responsible for the design, build, testing, installation and support of software applications required for the deployment of the Epic electronic medical record (EMR) system. Serves as a leader with overall responsibility for software analysis and design, application and system installation and implementation. Formulates system scope and design objectives through analysis and research to configure vendor maintained systems or develop or modify in house systems.

This individual must have broad knowledge of application integration and data flow, as well as extensive experience in the on-site installation and support of EMR applications. Primary responsibilities include designing and modifying screens, design and configuring reports, and application workflows to support the organizational needs of EpicCare and the related applications related the Epic system. As part of the project implementation team, this individual will provide expert and creative solutions to user requirements and problems. Takes the initiative to research, resolve and respond to inquiries during the deployment and ongoing maintenance/support phases of the program. This position requires knowledge of processes and workflows common in inpatient and ambulatory settings, in addition to advanced computer skills. Requires EMR implementation experience coupled with web design/marketing knowledge. May also take an active role in the implementation of programs related to the Epic Ambulatory EMR operations (such as MyChart online portal).

This position is responsible for acquiring knowledge of EPIC clinical software, working independently in completing project tasks and executing the following tasks as part of a clinical systems implementation: building system components, testing, documentation of workflows and other project information, implementation support and maintenance of Epic clinical system software. In addition this position requires the ability to independently interact with clients and demonstrate critical thinking and follow through when developing solutions to identified issues.

Responsibilities

- Reviews and understands system options and specifications in Business and Clinical applications and utilizes the specifications as applicable to make recommendations on use.
- Develops the preparation of functional and technical software specifications that reflect an in depth understanding of the business and end- user requirements while also considering the IT standards and technical direction.
- Performs in-depth analysis of end user department workflows, data collection, reports details and other technical issues associated with Epic software as they relate to system design and build decisions. Involves complex qualitative and quantitative analysis on data and information collected as part of application requirement gathering. Understand and translate the business functionality into Epic system configuration and workflow validations.
- Gathers business requirements, designs applications, and documents detailed specifications and prototypes.
- Analyzes design alternatives and makes appropriate design decisions. Designs, validates and confirms new or changed functionality with the Epic environment that meets customer specifications.

- Ensures the availability and efficiency of application processing, documentation and maintenance.
- Accesses data from existing systems and produces formatted reports using multiple data sources, with minimal assistance.
- Works with Epic and legacy system resources and the user community to ensure the applications meet the organizations needs. Advises senior analysts and/or managers of potential problems, requirements for expanded services and status of current systems on an ongoing basis.
- Proactively completes assigned Epic application deployment(s), management, and testing tasks.
- Builds, tests, and debugs Epic application(s) to ensure the system meets end user requirements. Builds complete testing plans to validate system parameters and functionality performs as specified, with minimal guidance.
- Listens to business needs expressed by clients and documents clearly system capabilities and constraints.
- Participates in identified development and production support meetings, reviews, and design sessions, as assigned
- Writes scope statements, defining size and planning parameters of complex projects or multiple groups of tasks with minimal guidance.
- Assesses risk, cost, schedule, and resource trade off when considering alternative IT solutions.
- Provides complete documentation of all tasks and projects; develops and maintains specifications according to departmental standards.
- Provide system production support including the analysis, prioritization and implementation of requested changes, analysis of new functionality, coordination of software release updates, system testing and interface enhancements.
- Develops report specifications and works closely with report writers to ensure all operational and regulatory reporting needs are met including reports necessary to comply with Meaningful Use requirements
- Assists application and technical teams in the on-going management of user requests, issues, clinical application problems, and delivery or information management systems solutions such as software enhancements or issue resolution.
- Manages customer expectations while prioritizing and implementing requested changes to the system.
- Adheres to organizational policies and procedures and documents change control and system problems according to departmental procedures. Develops and documents system and user procedures as necessary
- Manages small projects according to department standards with guidance. Completes project and department deliverables as directed by IT leadership. Assists in the planning and completion of projects on time and as designed. Performs work tasks according to work plans and within target times. Promptly notifies managers of problems, unexpected tasks and missed targets
- Follows the project lifecycle methodology on assigned projects and tasks.
- Performs end-user functions for assigned products to a high level of competency.
- Identifies and resolves complex issues. This includes identifying appropriate parties and potential solutions with minimal guidance. Delegates systems issues to junior resources for resolution. Provides guidance on priority.
- Works with all clinical, business and IT constituents in positive, supportive and collaborative team manner.
- Provides technical support to Business and Clinical Information Systems and applications and provides analysis of system requirements and specifications.

- Consults directly with clinical and business users, and provides second-tier support to end users to ensure reliable application system availability and performance.
- Evaluates clinic user competency and training requirements. Conducts structured training sessions for assigned applications/modules for small groups with minimal guidance. Actively pursues training and knowledge of new technologies, and completes training programs as required.
- Provides the necessary experience and knowledge to ensure all aspects of the application integrates with the other cross functional applications utilized by the organization.
- Develops and maintains a thorough knowledge of the medical and/or business operations of the assigned clinics, while managing vendor relationships and responding to any technical questions.
- Maintains software maintenance and report requests through service center tracking systems.
- Ensures that reports, data and devices are appropriately secured.
- Maintains awareness of the latest developments in key areas of responsibility and brings forward opportunities that might benefit the organization
- Provides guidance and mentoring for clinical customers.

Skills and Knowledge

- Knowledge and experience with health care information systems IT or knowledge of processes and workflows common in physician office practices across varied specialties combined with advanced computer skills. Preferred: prior experience working on project team(s), health care system administration, financial and/or clinical systems support and maintenance as well as general knowledge of major health care information issues.
- Knowledge of current business practices and computing systems, interfaces and hospital and medical group practice standard software including computer systems and methods utilized in structuring and preparing input data for computer applications. An ability to translate information into computer system specifications, design program logic for computer applications.
- Knowledge of a variety of hardware and software environments and of the healthcare industry and Epic healthcare applications required.
- Analytical skills necessary to apply computer technology to resolve clinical problems and/or increase operational efficiency of data processing systems. Ability to analyze the functionality of systems and their fit with specifications.
- Must be a technical expert in subject matter areas demonstrated by documented experience in analysis, process design and workflow, research, installation/implementation and support of software applications and systems.
- Advanced training in SAS, JMP or other statistical software packages is highly desirable.
- IT or clinical experience in one or more of the following areas is typically preferred: OR, Anesthesia, Emergency, Pharmacy, Oncology, CPOE, Clinical Documentation, Obstetrics/L&D, Radiology, Transplant or Ophthalmology.
- Understands relationships between system processes/programs, system parameters, files and data relationships for assigned products. Demonstrated knowledge of clinical documentation and orders databases, data conversion models, workflows, master files, category lists, synonyms and preference lists.
- Demonstrates exceptional ability to research, analyze and thoroughly understand workflows of end users, using this knowledge to configure systems which improve processes, add efficiencies and promote

patient safety. Ability to use standard flowcharting tools and techniques to create and maintain business process and functional flow charts. Is able to read and edit technical flow charts.

- Proficient knowledge of web-based technologies, processes, and analytics.
- Proven ability to deliver IT solutions through the entire systems development lifecycle (requirements, design, build, test, deploy, and support).
- Ability to employ software quality assurance and testing concepts, techniques, industry best practices, tools and standards.
- Ability to employ systems analysis concepts, techniques, industry best practices, tools and standards.
- Mastery of program development tools such as editors and configuration tools.
- Ability to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Excellent skills in dealing with unstructured problems that affect efficiency and effectiveness of customers
- Basic knowledge of standardized quality improvement methodologies.
- Demonstrates timely, effective and efficient troubleshooting of end user questions/complaints.
- Ability to respond to changing demands, priorities, procedures and technology.
- Able to lead large groups to make key decisions. Proven ability to lead meetings, prioritize, resolve conflicts, maintain issues lists and manage a project plan
- Interpersonal skills necessary in order to communicate effectively with user departments in ascertaining and converting needs for application to electronic data processing systems. Ability to express needs clearly, both verbally and in writing.
- Ability to work independently. Self-directed in identifying changing demands and priorities. Acts as a change agent in adjusting to new procedures and technology.
- Dedication to detail with proven organizational skills
- Ability to establish and maintain effective working relationships with co-workers, supervisors, and user department personnel
- Demonstrated competency in leadership skills. Leadership in communicating positively with end users, other analysts, management and customers; ability to effectively facilitate group discussion.
- Project management and planning expertise. Ability to set priorities, produce accurate work, and meet deadlines; ability to function in a setting with a wide variety of duties and numerous interruptions.

Experience

- Bachelor Degree in Health Care Administration, Clinical Information Systems, Informatics, Information Technology, or Sciences is required (or equivalent experience). RN, RRT, RPH, ARNP, PA degrees may be acceptable.
- 7 years experience in the healthcare field in a hospital or major medical center clinical setting, including hospital information systems selection, implementation and support. IT system deployment experience as a clinical analyst, business analyst or systems analyst with multiple technology implementations.
- 4 or more years experience with clinical hospital software and/or hardware technology, database, screen handler, query languages including designing, configuring, training, or implementing clinical systems applications. Healthcare operations background is desirable, such as billing, scheduling, access services, health information management or other support functions.

- Solid knowledge of operational healthcare hospital workflows required. Experience with clinical and business workflow analysis for development of electronic solutions within assigned application.
- 2 years of hands-on Epic clinical systems experience with appropriate Epic training in at least one area and at least one Epic certification
- Demonstrated technical administrative experience with Epic clinical applications, including but not limited to master file maintenance and clinical build (i.e. smart sets, order sets, documentation flowsheets). Proven experience supporting Epic clinical systems is required, with design, build and validate experience.
- Experience with currently installed computer and telephone equipment, and operating systems.
- Training in systems analysis with special emphasis in data processing standards, supervisory techniques, user relations, data gathering techniques, written and oral communications, and management information systems relative to the assigned area(s) of responsibility (i.e., financial applications, patient care applications, etc.).
- Proven record of excellent leadership, communications, and organization skills.
- Proven project management experience, both leading and participating on project teams, from initiation through successful implementation and acceptance of application changes.
- Proven experience and ability to work with SDLC concepts.
- Excellent analysis, problem solving, and trouble-shooting skills
- Excellent customer service skills
- In-depth experience with Microsoft Office tools.
- Good communication skills in technical and non-technical vernacular
- Ability to write technical documentation in a clear manner.
- Core competencies include the ability to communicate effectively, work as an independent professional, be self-motivated, and work effectively in a team setting to facilitate timely and successful systems deployment and program execution.

Working Relationships

Internal:

- This position reports to the Epic Application Manager or equivalent, taking direction from and collaborating with the manager on work priorities and assignments as well as resolution and escalation of issues.
- Works closely with the other application analysts and project teams to complete actions as assigned on team-level work plans and report status, progress and project-related issues to the Application Manager or senior analyst as appropriate.
- Acts independently under general supervision, requiring minimal instruction and guidance.
- May supervise lower level analysts.

External:
- Works closely with vendors
- Is in frequent communication with other companies and outside vendors on technology issues.
- Develops relationships with professional organizations, user groups, and help function personnel at other companies to keep abreast of new industry trends.

SAP Configuration Analyst

The SAP Functional Configurator is an IT specialist with proven expertise in business processes and SAP enabling technologies. Performs program configuration/modification and set-up activities and provides solution design, configuration, deployment and maintenance direction for a specific functional area using common process techniques. Responsible for understanding business requirements and configuring program properties to meet those requirements. Has extensive knowledge of how a specific SAP package works and how it needs to interface with other functional areas. This position is responsible for business requirements gathering, documentation, set-up activities, configuration, testing and user support for SAP application software. Maps the solution to business requirements within the standards framework and program principles in place, ensuring adherence to SAP leading practices and ensures business value is delivered in accordance with business transformation objectives Hands-on and potential leadership of cross-functional teams tasked with solving business issues. The Lead provides technical direction for specific process and sub-process areas or assigned tasks. Responsible for understanding how to estimate, configure and leverage SAP functionality to meet business process needs. The lead also interfaces with Business Stakeholders, IT Infrastructure teams and Development teams to ensure that business requirements are properly configured within SAP package. Provides expert technical direction to functional configurators and contractors.

Responsibilities

- Work with the business to develop SAP solutions to support their processes. Participate in and provide technical expertise as a project team member in various SAP implementations.
- Perform program configuration/modification and set-up activities on multi-scale projects using specific company process techniques.
- Perform complex analysis of business goals, objectives and needs of the general business environment and may create complex functional and technical specifications and flowcharts.
- May facilitate complex business case development (planning and initiation, responding to budget/plan changes, perform ad hoc planning requests and evaluations.
- Provide daily production support to end-user community for a specific SAP module(s).
- Work closely with the internal customers to prepare functional development specifications and potential system configuration changes. Gather detail requirements from business users for approved large scale projects and small enhancements to existing projects.
- Coordinate User Acceptance testing (UAT) with the business client. Provide input to Business Requirement Documents (BRD) and functional specification documents to UAT and system test groups, in order to assist with testing scenarios.
- Provide System Requirement Documents (SRD) and Systems External Specifications (SES) documents to UAT and System test groups, to assist with testing scenarios.
- Participate in design workshops and design reviews
- Work collaboratively with IT and business partners to define functional, mapping and technical solutions; proactively provide knowledge and expertise on best IT and business practices.
- Perform and document the results of "Fit Gap" analysis; Review all deliverables throughout the project lifecycle to ensure completeness, consistency, quality and requirement traceability. Positively represent your designs in architectural reviews.

- Proactively identify, analyze and mitigate project and operational risks (resourcing, project/task dependencies and delivery risks)
- Document all aspects of the system (e.g. process design, User Requirements Specifications, Functional System Requirements and Developments Specifications, test plans, integration efforts, etc.
- Support data migration and cutover plans in support of project schedules
- Serve as support analyst for issues that the support staff is not able to independently resolve.
- Handle the due diligence and/or sizing phase of management queries and/or new initiatives.
- In the spirit of continuous improvement, proactively recommend enhancements to existing business and/or IT processes.
- Coordinate training and rollout plans for new systems or enhancements to existing systems.
- Provide expert technical direction to contractors.
- Interface with Business Stakeholders, IT infrastructure teams, development teams to ensure that business requirements are properly configured within a software package.
- Develop written reference and support material related to reporting, analytics and decision support solutions. Ensure the quality and accuracy of documentation provided by other team members.
- Facilitate communication with business stakeholders regarding status and evolution of IT and reporting-related initiatives.
- Analyze complex business process requirements and provide appropriate system solution; identifies, interprets, validates and documents customer requirements
- Partner with peers when integrating functionalities across applications and/or modules
- Develop profiles and authorizations within the application
- Develop and deliver application training to customers
- Use the business process requirements to detail application requirements, solution design, adherence to SAP best practices, and metrics
- Collaborate with development workstream leads to ensure functional knowledge transfer for development. Allocate work to workstream team members and provide quality reviews of deliverables
- Provide direction for all aspects of delivery for a process area
- Collaborate with process leads to support global template
- Work self-directed and independently; may act as subject matter mentor to more junior members

Skills and Knowledge

- Critical competencies required in this job:
  - *Core Technical Leadership.* Demonstrates leadership in the development of technical innovations and in ensuring optimum collaboration and knowledge sharing of technical insights.
  - *Technical Solution Design.* Creates a solution vision and design framework for guiding and synthesizing the technical contributions of specialists.
  - *Technical Project Management.* Helps develop and implements project strategy and direction
  - *Information Management Acumen.* Demonstrates fundamental understanding of information management systems and infrastructure.
  - *Organizational Interface Management.* Actively bridges technical and business cultures and perspectives to promote cross-organizational collaboration.
  - *Technical Excellence Development.* Recognizes the interrelationship of individual and organizational excellence, and their contribution to technical leadership.

– *Technical Performance Optimization.* Exercises personal authority and organizational leadership to establish and maintain employee excellence.
- End to end implementation knowledge and configuration expertise with one or more of the following SAP modules and components:

AFS (Apparel and Footwear Solutions)	MI (Mobile Infrastructure)
ALE (Application Link Enabling)	MII (Manufacturing Integration and Intelligence)
APO Advanced Planner & Optimizer	MM (Materials Management)
Auto-ID Infrastructure (SAP RF)	MRO (Maintenance, Repair and Overhaul)
ASAP (Accelerated SAP)	MRS (Multi Resource Scheduling)
Basis Components	NetWeaver Applications Server
BW Accelerator	NetWeaver BW (NetWeaver BI)
BPC (Business Objects Planning/Consolidation)	NetWeaver PI (SAP XI)
BSP (Business Server Pages)	NetWeaver Portal/SAP EP
BI/BW (Business Warehouse)	NetWeaver Process Integration
CA Cross Application	NetWeaver Visual Composer
CAF (Composite Application Framework)	NWDI (NetWeaver Development Infrastructure)
CCM (Catalog Content Management)	PLM (Product Lifecycle Management)
CE (NetWeaver Composition Environment)	PM (Plant Maintenance)
CFM (Corporate Finance Management)	PP (Production Planning)
CO (Controlling)	PS (Project Systems)
CO-PA (Profitability Analysis)	PSCD (Collection and Disbursement)
CRM (Customer Relationship Management)	QM (Quality Management)
CS (Customer Service)	SAM (Service and Asset Management)
EBP (e-Procurement)	SAP Banking
EDI	SAP BODI
EHS (Environmental Management)	SAP BODS
EPM (Enterprise Performance Management)	SAP BOXI
ERP Operations (multi-skills)	SAP Business One
ESA (Enterprise Services Architecture)	SAP Business Workflow/Webflow
FI (Financial Accounting)	SAP Crystal Reports
FI-CA	SAP Manufacturing
FI - FSCM (Financial Supply Chain Management)	SAP Oil & Gas
FI - Travel Management	SAP Public Sector Management
FS (Insurance)	SAP Retail
GRC (Governance/Risk Mgmnt/Compliance)	SAP Security
GTS (Global Trade Services)	SAP Smart Forms
HANA (In-Memory Appliance)	SAP Solution Manager
HCM (SAP HR)	SAP Web Application Server
HCM ESS/MSS	SAP WEBI
HR-PA (Personnel Administration_	SAP Xcelsius
HR-PY (Payroll)	SAP xMII
IS-U (Utilities)	SCM (Supply Chain Management)
ITS (Internet Transaction Server)	SD - GTS (Global Trade Systems)
KW (Knowledge Warehouse)	SD (Sales and Distribution)
LES (Logistics Execution System)	SEM (Strategic Enterprise Management)
LO (Logistics General)	SLM (Solution Lifecycle Management)
MDM (Master Data Management)	SM (Service Management)
MDX (Multi-Dimensional Expression Language)	SRM (Supplier Relationship Management)

SAP modules and tools, cont'd:

Success Factors
TM (Transportation Management)
Web Dynapro
WM (Warehouse Management)
WM - EWM (Extended Warehouse Management)

- Has participated in the end to end implementation of multiple SAP solutions. Cross SAP module integration skills.
- Strong decision making and solid experience with package software implementation methodology and tools
- Proven problem solving skills and the ability to troubleshoot and quickly identify root cause of issues, then provide steps to resolution and recovery of impacted transactions
- Proven analytical skills
- Superior collaboration and communication skills - ability to develop productive relationships with cross-functional stakeholders; lead without formal authority; guide teams to appropriate outcomes. Proven ability to lead technical discussions.
- Ability to succinctly identify business requirements and document design.
- Solution oriented, creative thinker
- Accountable and empowered; ability to take responsibility, self-start to ensure realization of desired business outcomes. High internal drive/self-initiative; Ability to work with ambiguous and incomplete information. Resourceful.
- Ability to effectively manage priorities of self and others, create focus, eliminate roadblocks, and use time effectively.
- Proven track record delivering results.
- Ability to build consensus, share knowledge, and work in a team.
- Can think strategically, design new solutions, apply knowledge to business solutions, and communicate solutions to varied audiences.
- Can lead small to large size projects. Must be able to work in a team/cross-functional environment. Ability to communicate to a wide variety of audiences, both business and technical
- Strong relationship building and influencing skills. Able to mediate opposing viewpoints. Work well in a team environment.
- Ability to effectively communicate, both written and verbal, with individuals at all levels of the organization (Analyst to Director). Proven ability to present ideas or demos to large audience.
- Deep interest to continue to grow technically.
- Ability to work independently with minimal direction

Experience

- Bachelor degree or equivalent degree in a math, engineering, computer science or business preferred.
- 6 years of SAP experience including at least three years direct hands-on experience in full lifecycle SAP implementations and deep functional configuration experience with one or more SAP modules and related components.

- 1-2 full lifecycle SAP implementation experience and an in-depth understanding of SAP integration and ASAP methodology. Three years complex data analysis and reporting experience in an SAP environment is strongly preferred.
- Industry experience in a related area is preferred (e.g. Retail, Manufacturing. et al)
- Experience in generating and delivering business process definitions, gap/fit analysis, pre-implementation workshops and blue printing. Experience in the creation and maintenance of business requirements documents, statements of work, project plans, test plans, and other project-related documents.
- Proven experience in defining solution strategies, building business cases, analyzing systems requirements, developing process maps and swim lanes, designing and prototyping solutions, defining testing requirements, defining support procedures, and implementing practical solutions.
- Proven ability to work creatively and analytically in a problem solving environment with strong decision making skills. Strong analysis skills that have been proven in an application development / ERP implementation environment.
- Project Management, Process Management or Software Development Life Cycle methodology. Ability to manage small to medium projects, sub-projects, deliverables, and milestones. Able to provide oversight across multiple initiatives or projects.
- Strong communication skills both written and oral are required.
- Ability to be self directing and work independently. Ability to manage workload and concisely report project status.
- Extensive software knowledge including Microsoft Word, advanced MS Excel data manipulation and formatting, and MS Access.
- Proven ability to identify and understand problems and/or issues and develop solutions.
- Interest in developing knowledge around specific business areas, and how systems can be used to solve business problems in those business areas.
- Strong organizational and analytical skills.
- Strong verbal and written communication skills.

Working Relationships

- Typically reports to a director of manage level IT executive or senior program or project manager.
- This role has no direct reports on a permanent basis, but requires the leadership of a work group: assign and review work, train and contribute to performance appraisal (but not hiring, firing or disciplinary action).
- Position typically reports to a Manager or Senior Manager
- No associates report to this role on a permanent basis, but requires the leadership of a work group: assign and review work, train and contribute to performance appraisal (but not hiring, firing or disciplinary action).