

Evan Varghese

Academic Profile

Class of 2019

McKinney High School, McKinney, TX

GPA: 4.00 Unweighted | 4.92 Weighted

Advanced Placement Courses

- | | |
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| <ul style="list-style-type: none">• Human Geography• Biology• Chemistry• World History• Computer Science A | <ul style="list-style-type: none">• Calculus AB• Calculus BC• Physics• English Language• US History |
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Standardized Test Scores

SAT: 1600 (800 Math | 800 English)

SAT Subject Tests: Math 2: 800 | Physics: 800

Additional Coursework

- | | |
|---|---|
| <ul style="list-style-type: none">• Introduction to Mathematical Thinking | Stanford University Coursera, 2017 |
| <ul style="list-style-type: none">• The Data Scientist's Toolbox | Johns Hopkins University Coursera, 2017 |
| <ul style="list-style-type: none">• Object Oriented Programming | UC San Diego Coursera, 2017 |
| <ul style="list-style-type: none">• Introduction to Electronics | Georgia Tech Coursera, 2018 (in progress) |

Work & Internship

Summer Intern

CORNING Inc. Keller, TX

Summer Intern at Active Electronics Engineering Group from Jul to Aug 2018.

Designed and implemented a new test database reporting application with Flask framework and coding in Python. Application is used in manufacturing environment to analyze and report product test data.

Undertook a self-study to understand product design cycles of RF Distributed Antenna Systems (DAS) products – from block diagram, electrical schematics, PCB Layout and Prototyping.

Honors & Awards

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- National Merit Scholarship (Semi-finalist) McKinney, TX, Sep 2018
- National AP Scholar (Distinction) McKinney, 2018
- National Champion (Alternate), TSA Coding Atlanta, GA, Jun 2018
- National Semifinalist, TSA Software Design Atlanta, GA, Jun 2018
- State Champion, TSA Software Development Fort Worth, TX, Apr 2018
- State Champion, TEAMS Competition Richardson, TX, Apr 2018
- Regional Champion, TSA, System Controls Lubbock, TX, Mar 2018
- 1st, District, Physics Olympics McKinney, TX, May 2018
- 1st, District, American Mathematics 10 McKinney, TX, Sep 2017
- Regional Champion, TSA, Animatronics

Leadership Profile

Community Service

- Organized Arduino education program to teach middle school students the fundamentals of programming, 2016
- Organized and attended multiple church and school community events, 2016-2018
- Tutored multiple students for the SAT, increasing scores by 150+ points, 2018

Organization Leadership

- **Secretary, Computer Science Club** (2017 - Current)
 - Organized and managed a women's programming seminar and competition in McKinney High School
 - Organized and managed educational sessions for young programmers in McKinney High School
- **Secretary, Engineering Club** (2018 - Current)
 - Developing fund raising strategies through sponsorships for 2019
 - Aligning the team for 2019 TSA competition

Organizations and Associations

- Computer Science Club (2016 - Current)
- Debate Course Program (2017-2018)
- School Honors Orchestra (Violinist) (2012 - 2017)
- TSA Local Chapter/ Engineering Club (2016, 2017, Current)
- Youth Committee, CSI COD (2017)

Extracurricular Profile

Skills & Proficiency

Database & Web

- Web Design (HTML, CSS)
- Database Development (MySQL)

Software Coding

- Java
- Python

Computer Aided Design

- Autodesk Inventor
- Autodesk Fusion
- Adobe Illustrator

Microcomputer & Microcontroller

- Raspberry Pi – build, code, hats
- Arduino - build, code, shields

Machining & Fabrication

- Machining & Fabrication: Milling, Cutting
- Electronics Assembly: Assembly, Soldering

Computer Aided Machining

- Additive Manufacturing- 3D printing (PLA)
- CO2 Laser Cutting & Engraving

Maker Experience & Projects

Experience in concept design to working products. Familiar with CAD design and basic electronics assembly and measurements. Designed and built multiple mechanical models and integrated with electronic controllers. Developed and implemented software and firmware code for automation and control.

Smoke&Temp BBQ Controller: Smoke and Temp with closed loop air-flow microcomputer control for smoker grill based on Raspberry Pi. Designed and 3D printed mechanical system for blower motor and butterfly valve. Software: Raspbian, Python + TKInter GUI

Multi-link Robotic Manipulator: Built a 6DOF mini manipulator with 6 servos and Raspberry Pi motor drive and controller. Develop code for preprogrammed motion. This was project was as a self-learning platform. Software: Python and Java Script

Self-guided vehicle: Based on NIKKO 4wheer framework. Integrated with Arduino Platform for basic obstacle avoidance with ultrasonic sensing and start and stop functions. This project was as a self-learning platform. Software: Arduino IDE

First Robotic Competition (FRC): Participated in High School FRC team(2015-2016) and designed and a built an autonomous vehicle. Team qualified for FRC regionals.

Fine Arts

- Violin – Middle School and High School Orchestra (Honors) 2013-2017
- 2015 TMEA Honors Orchestra champions
- Piano
- BBQ Smoking