

Surya Somayyajula

EDUCATION

Herndon High School, Herndon, VA— *Advanced Diploma*

AUGUST 2017 - JUNE 2021

Relevant Coursework: Computer Science, AP Computer Science A, Advanced Computer Science AB, Cybersecurity, Robotic Systems 1, Precalculus Honors, AP Calculus BC, Multivariable Calculus, Linear Algebra, AP Physics 1, AP Statistics, Entrepreneurship 1 and 2, Web Development

Received AP Scholar 2019 award

Received AP Scholar with Distinction 2020 award

NASA Virginia Space Grant Consortium

DECEMBER 2018 - JUNE 2020

Accepted into Virginia Space Coast Scholars as a sophomore and Virginia Aerospace Science and Technology Scholars as a junior. Took two online courses throughout sophomore and junior years (**college credit: MEC-195 at Thomas Nelson Community College for the latter**) and participated in programs during the summer of 2019 and 2020.

Polygence

JUNE 2020 - PRESENT

This is an online mentorship program for technology projects. I am working with Nathan Lambert, a Ph.D. student at the University of California, Berkeley, on my **machine learning-based prosthetic hand prototype**.

EXPERIENCE

DotBot, Evanston, IL— *Co-Founder, Chief Technology Officer*

JULY 2019 - PRESENT

DotBot is an affordable, **patent-pending (tactile printing system and method: US 62/892,591)** optical character recognition-based braille embosser for the visually impaired. This was **started through the LaunchX incubator at Northwestern University**, and I was selected from an international pool of applicants with a 10% acceptance rate.

Fairfax County Science and Engineering Fair (FCSEF), Herndon, VA

AUGUST 2017 - MARCH 2019

In 9th grade, a classmate and I found that analyzing emitted physical signals from air-gapped computers can determine what applications are running on such computers in real-time and **won 3rd place in systems software FCSEF 2018**. In 10th grade, I used simulated quantum computing to optimize deep reinforcement learning algorithms on tasks such as bit-flipping and training a simulated robotic arm. **This project won an honorable mention and certificate of merit from the Armed Forces Communications and Electronics Association at FCSEF 2019.**

TECHNICAL SKILLS

Knowledge in computer science, particularly machine learning

Programming Languages/Frameworks: Python, Java, Ruby, HTML/CSS, Tensorflow, PyTorch, Octave/R

Operating Systems: Windows, Mac OS, Linux

Software: Microsoft Office, Fusion 360, Autodesk Inventor

EXTRACURRICULARS

Computer Science Club, Co-Founder

Debate Team

Varsity Math Team

National Honor Society

PROJECTS

Pedagogical Research

I conducted a literature review for a computer science education project, in which my partners and I tested different modes of learning. **I also made the software for a math education project and wrote a report**, while my partner conducted the experiment in a primary school.