# ANUSHA **DATAR**

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## EDUCATION

**OLIN COLLEGE OF ENGINEERING** **MAY 2021**

***BACHELOR OF SCIENCE IN ELECTRICAL AND COMPUTER ENGINEERING***

***Recipient of Four-Year, Half-Tuition Merit Scholarship***

**Relevant Coursework (through Fall 2018):** Data Structures and Algorithms, Computer Networks, Computer Architecture, Introductory Electronics, Modeling and Simulation in Python, , Signals and Systems, Electricity and Magnetism, Linear Algebra, Multivariable Calculus

**Activities:** Rocket Team (Engineer, Electronics with a focus on firmware and software), Human Augmentation Lab (Researcher, Signal Processing and Brain-Computer Interfaces), Hackathon Club (Founder), Student Government Leadership, Stay Late and Create Leadership, Peer Advocate, Sandwich Discourse Club (Founder)

## SKILLS

**COMPUTING:** C, Python, Java, Embedded Development, Wireless Networking, HTML/CSS/JS, Git
**FABRICATION/PROTOTYPING:** Electronics Design/Fabrication, HAM Radio (General Licensed), 3D Printing/CAD, Basic Machine Shop/Tools
**OTHER:** Writing, Public Speaking, Project Management, Laptop Diagnostics and Repair (Dell Certified)

## EXPERIENCE

**SILICON LABS** **EMBEDDED SOFTWARE APPLICATIONS ENGINEERING INTERN** **SUMMER 2018**

Developed customer-facing programs, demonstrations, and projects in C with a focus on ZigBee 3.0 wireless network security for microprocessor/radio modules. Public-facing projects include a set of customer code and instructions for a trust center swap-out toolkit for the EmberZNet stack on Host/NCP and SoC platforms.

**THE MITRE CORPORATION** **EMBEDDED SOFTWARE INTERN** **SUMMER 2017 AND JANUARY 2018**

Created Python/C++ maintenance and platform abstraction frameworks for multi-platform GNSS system. Also applied principles of machine learning to wireless signal modulation recognition and decoding for real-time data analysis.

**OLIN COLLEGE OF ENGINEERING** **IT TECHNICIAN** **SEPTEMBER 2017 - PRESENT**

Diagnose, repair, and maintain student and school devices, equipment, and networks.

**ART OF PROBLEM SOLVING** **GRADER/TEACHING ASSISTANT** **APRIL 2017 – PRESENT**

Provide thorough and inquiry-based feedback and guidance in Python and mathematics courses in real time, on online forums, and for formal problem sets through an online classroom system.

## PROJECTS

**WIZARDS' CHESS,** JANUARY – MAY 2018

Designed and fabricated automated physical chessboard where user can leverage voice commands to play chess against an AI-powered opponent. Worked on this project in an interdisciplinary team of four over one semester as an independent personal project based on a prior prototype built at a hackathon. Personally focused on electronic system design and assembly, software design, and voice recognition.

**MINIATURE TOTAL STATION,** JANUARY – MAY 2018

Designed, prototyped, and tested robust and sensor fusion enabled elevation and depth measurement and collection unit for Wellesley College geology department using a custom electronics configuration, C, and Python in collaboration with a mechanical engineering student as a project for the Olin College Computer Networks course. Finalized prototype was ten times more affordable than existing products.

**RASPBERRY PI TRANSMITTER,** SEPTEMBER – DECEMBER 2017

Individually built C and Python library for transmitting any arbitrary radio wave on any frequency using Raspberry Pi minicomputer without any external hardware as an independent personal project. Validated functionality by sending commands to a remote controlled car.

**NEWS DETECTOR,** DECEMBER 2017

Developed dynamic, robust, and machine-learning powered suite of metrics with user interface to help consumers evaluate news sources for clarity, fraudulent information, and additional factors in a team of four for the Poynter Institute of Journalism and Facebook.