

# 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, Analog Electronics, Modeling and Simulation in Python, Signals and Systems, Electricity and Magnetism, Linear Algebra, Multivariable Calculus.

**Activities:** Human Augmentation Lab (Researcher, Signal Processing and Brain-Computer Interfaces), Student Government (President), Stay Late and Create Leadership

## SKILLS

**COMPUTING:** C, Python, Java, C#, Embedded Development, Wireless Networking, HTML/CSS/JS, Git

**OTHER:** Electronics Design/Fabrication, HAM Radio (Extra Licensed), 3D Printing/Basic CAD, Basic Machine Shop/Tools, Laptop Diagnostics/Repair (Dell Certified)

## EXPERIENCE

### MICROSOFT CORPORATON

#### DEVICES SOFTWARE ENGINEERING INTERN

SUMMER 2019

Developed hardware interfaces and software infrastructure to enable the development of optical tests for the Manufacturing Test Engineering. Also worked on design and implementation of tools that leveraged these interfaces.

### SILICON LABS

#### EMBEDDED SOFTWARE APPLICATIONS ENGINEERING INTERN

SUMMER 2018

Built 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.

### OLIN COLLEGE OF ENGINEERING

#### TEACHING ASSSITANT

SEPTEMBER 2018 – PRESENT

Hold office hours and assist with grading for courses such as Analog Electronics and Data Structures and Algorithms.

### 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

### UNIX SHELL AND TEXT EDITOR IN C, MARCH 2019

Collaborated with three-person team to build fully functioning [UNIX shell](#) that supported piping, redirection, and globbing. Also added built-in C-language add-ons including a functional, VIM-like text editor and LISP interpreter.

### CNC PCB MILL, SEPTEMBER – DECEMBER 2018

Worked with an interdisciplinary team to build and develop a [CNC PCB mill](#) with smooth user interface capable of producing complex designs. Personally focused on electronic and software design and implementation.

### VERILOG AND GAME OF LIFE CPU, SEPTEMBER – DECEMBER 2018

Developed complete MIPS-compliant [single-cycle](#) and [pipeline CPU](#) using Verilog in three-person team. Then explored alternative computing frameworks by building an adder in Conway's Game of Life.

### WIZARDS' CHESS, JANUARY – MAY 2018

Designed and fabricated automated physical chessboard where a 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.