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 Spring 2019): Microelectronic Circuits, Software Systems, 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, Amateur Radio

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**

Built hardware interfaces and software infrastructure to automate optical validation for device displays as part of larger Manufacturing Test Engineering ecosystem. Designed and implemented tools that leveraged these interfaces.

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.

OLIN COLLEGE OF ENGINEERING **TEACHING ASSSISTANT** **SEPTEMBER 2018 – PRESENT**

Hold office hours, provide feedback and guidance in lab work, and assist with grading for courses such as Analog Electronics, Data Structures and Algorithms, and Machine Learning.

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 computing platforms with 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.