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 **C# 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.