Akshaya Naapa Ramesh

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EDUCATION

University of Michigan, Ann Arbor, MI — April 2026

Bachelor of Science in Engineering in Computer Engineering

GPA: 3.86/4.00

Activities: Michigan Mars Rover Team, Girls in EECS, Arts Chorale

Honors: Dean's List - Fall 2022, Winter 2023, NCWIT Aspirations In Computing: National Honorable Mention (2022)

Relevant Courses:

Data Structures and Algorithms, Introduction to Computer Organization, Logic Design, Introduction to Electronic Circuits, Discrete Mathematics

PROJECT EXPERIENCE

Michigan Mars Rover Team, University of Michigan, Ann Arbor, MI,
Embedded Hardware Team Member — Aug. 2022 - Present

- Drafted requirements and designed 24v-converter printed circuit board on Altium Designer to assist power distribution of the Mars Rover
- Assisted team in schematic design and layout of a CAN transceiver to aid CAN communication protocol
- SMD soldered and assembled PCBs integral to rover operations

Pre-College Research Institute, Harvard University, Cambridge, MA
Social Sciences Student & Researcher — June 2021 - Aug. 2021

- Proposed research project: Analyzing Twitter Ethnographies on Viewpoints on World Hunger.

MIT Beaver Works Summer Institute, MIT Lincoln Laboratory, Lexington, MA,
Medlytics Student & Researcher — Jan. 2020 - Aug. 2020

- Built custom machine learning model that classifies lung cancer from lung tissue images.
- Developed user interface of classifier in Flask framework for medical professionals

WORK EXPERIENCE

Supplemental Instructruction Leader, University of Michigan, Ann Arbor, MI,
Programming & Introductory Data Structures — Aug. 2023 - Present

- Created additional practice worksheets on current course topics for students
- Conducted weekly lectures reviewing course topics and worksheet problems

SquareTrade, Inc., Remote
Fullstack Software Engineering Intern — June 2023 - Aug. 2023

- Built consumer electronic warranty replacement portal in Angular & Spring Boot
- Designed an algorithm that matches original product to replacement options from potential business partners' APIs

PERSONAL PROJECTS | Github: https://github.com/akshayanr

4-Function Calculator | Verilog, Quartus Prime, ModelSim, Altera DE2-115

- Built an RTL sequential calculator in Verilog that performs addition, subtraction, multiplication, and division
- Implemented ripple carry adder and Booth's multiplication algorithm with error checking
- Tested design through testbench simulations on ModelSim and manual operations on Altera DE2-115

Dorm Security Lock System | Verilog, Quartus Prime, ModelSim

- Created an RTL security lock system in Verilog that takes in 8 digit student ID and opens access if valid ID
- Developed edge case test benches and simulated design in ModelSim

Lung Cancer Classifier (Medlytics Research Project) | Python, Pandas, Scikit-learn, Keras, CSS, HTML

- Developed machine learning classifier using VGG-19 transfer learning model and 15000 histopathological images of healthy and cancerous lung tissue from Kaggle
- Created data augmented histopathological images using ImageDataGenerator for training classifier

SKILLS

- **Software/OS:** C, C++, Verilog, Python, Java, Java Script, Windows, MacOS, Linux
- **Applications**: Quartus Prime, ModelSim, Altium, Jupyter Notebook, Android Studio, Angular, SpringBoot, Docker, Git, Jira
- **Equipment:** Altera FPGA, SMD Soldering
- **Methodologies:** Agile
- **Certifications:** Learning FPGA Development (LinkedIn Learning), Android Basics (Udacity)