Ayan Nair

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Education

University of Michigan — Ann Arbor, MI

Bachelor of Engineering in Computer Science and Robotics — *Expected May 2026*

Honors/Awards: *Dean's List, University of Michigan Regents Merit Scholarship*

GPA: *3.81/4.00*

Relevant Coursework: *Operating Systems (Spring 2025), Computer Organization, Data Structures and Algorithms*

Experience

Engineering Intern — July 2024 – Present

DeepCharge Inc. — *Boston, MA*

- Assisted in development and deployment of wireless charging products from AI-based startup
- Thoroughly tested software and hardware components for functionality and consumer satisfaction
- Generated comprehensive quality analyses and contributed to presenting products to potential stakeholders

Undergraduate Research Assistant — Nov 2021 – May 2023

Michigan State University — *East Lansing, MI*

- Developed a machine learning model to predict the location of atoms from the backbone of mutated proteins under professor supervision
- Normalized molecular vector data and implemented PyTorch for designing machine learning framework
- Performed with a minimum accuracy of 95% across all atom types in classification

Instructional Aide — Mar 2023 - Aug 2023

Mathnasium — *Okemos, MI*

- Provided personalized math instruction to students of various ages and skill levels
- Designed and implemented tailored learning plans to address individual learning needs and goals
- Monitored student progress and provided ongoing feedback to ensure comprehension and academic growth

Projects

visuAIize | *Python, Gemini API, OpenCV, Toga GUI* — April 2024 – April 2024

- Developed a software with Google's Gemini API to serve as an aide for the visually impaired
- Designed frontend and backend with Toga GUI to capture real-time footage and integration with Gemini API
- Utilized OpenCV and Threading libraries to parallelize uploading captured footage and retrieving LLM response
- Presented at MHacks x Google Hackathon

UEFA Euro 2024 Predictor | *Python, scikit-learn, pandas, Matplotlib, MySQL* — Jan 2024 – April 2024

- Designed machine learning architecture with RandomForest from scikit-learn to forecast tournament outcome
- Utilized BeautifulSoup to obtain and compile numerous advanced statistics from European soccer teams
- Generated and refined a comprehensive database with MySQL and Pandas
- Conducted regression tests and trend analysis on cross-competition metrics using Matplotlib

COVID-19 Chest X-ray Predictor | *Python, TensorFlow, Keras, PIL, SciPy* — Nov 2020 – May 2021

- Derived a convolutional neural network model from ResNet50 to predict COVID-19 diagnosis from chest X-rays
- Employed TensorFlow and Keras frameworks to construct a 10-layer model
- Attained an impressive accuracy of 98.3% with a minimal false positive rate of 0.82%
- Presented findings at the International Science and Engineering Fair (ISEF)

Skills

Languages: Python, C++, JavaScript, Java, Verilog

Frameworks: Node.js, Express.js, React.js, TensorFlow, MySQL

Technical Skills: Machine Learning, Full-Stack Development, Embedded Systems Programming, Product Management