Naveen Kamath

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TECHNICAL EXPERIENCE

High Performance Computing Lab | Undergraduate Research Associate | Columbus, OH Incoming Sept 2025

- Will contribute to research in high-performance computing, distributed systems, and AI under Dr. Hari Subramani

Air Force Research Laboratory | Software Engineer Intern | Dayton, OH

- **Summer 2025** – Python RESTful API + .NET/C# backend integration | GitHub
  - Built a MicroPython RESTful API integrated with the ARES OS .NET backend to operate microcontrollers
  - Contributed to open-source PyARES/ARES OS by increasing accessibility for non-programmer researchers
- **Summer 2024** – Unreal Engine Mobile app
  - Developed a multiplayer touch-screen application with state management and network systems
  - Analyzed 10+ datasets using ML regression models to determine optimal flight times for C-130 pilots
- **Summer 2023** – Mixed Reality Simulation
  - Created a Mixed Reality elevated radial maze in Unity with biometric data collection (heart rate, eye dilation)
  - Captured both cognitive and physiological responses to evaluate laser deterrent efficacy

Ohio State Wexner Medical Center | Undergraduate Research Assistant | Columbus, OH Aug 2024 - May 2025

- Developed a Flutter-based mobile health app to be used in a gestational diabetes clinical trial for biometric logging
- Engineered secure biometric data logging via Apple Health Kit integration with encrypted SQLite + OAuth 2.0
- Implemented an LSTM Deep Learning model analyzing 120,000+ CGM data points per participant with 0.0033 MSE

EDUCATION

The Ohio State University – Main Campus | Columbus, OH

B.S. in Computer Science and Engineering | **Minors:** Biomedical Engineering & Mathematics **May 2027**

Relevant Courses: Computer Organization and Assembly Language, Data Structures and Algorithms, Object-Oriented Programming, Digital Logic Design, Discrete Structures, Fundamentals of Engineering, Linear Algebra

PROJECTS

Comparative Study of Sequential Models on CGM Data | Personal Project | GitHub **July 2025**

- Benchmarked LSTM, Transformer, and Mamba architectures and processed over 100,000 CGM and ECG data points

Degree Audit Parser | HackOH/IO 12 Project | GitHub **October 2024**

- Led a team of four to develop a web app in React.js to present missing course details with responsive UI design
- Connected the backend to the frontend using Axios to handle API requests, integrating OSU Class Search API

Look2Type | Hack/AI 8 Project | GitHub **February 2024**

- Developed a webcam-based digital keyboard using eye-tracking, achieving 90% typing accuracy in real-time tests
- Preprocessed and annotated 800+ images to train a PyTorch-based gaze prediction model in real-time gaze typing

LEADERSHIP EXPERIENCE

Chief Technology Officer/Founding Member | Lanarchy Club **August 2024 - Present**

- Designed and deployed thelanarchy.org using React.js and Bootstrap, enabling 250+ new members to join the club
- Engineered a bot leveraging Discord REST API and Google Sheets API to track club member statistics in real-time

TECHNICAL SKILLS

Programming Languages: Java, C, C#, Python, JavaScript, HTML, CSS, Dart, SQLite, RESTful API, Json, Assembly

Frameworks: React.js, Flutter, Flask, Computer-Aided Design (CAD), OpenCV, PyTorch, NumPy, Pandas, Tailwind CSS

Concepts: Machine Learning, Deep Learning, Object-Oriented Programming, Network Systems, Game Design

Tools/Technologies: Git, GitHub, VS Code, Raspberry Pi Pico, Android Studio, Unity, Unreal Engine 5