Soham Jain

240-728-8946 | jainsoham01@gmail.com | sjain2025.github.io | linkedin.com/in/soham-jain1 | github.com/sjain2025

EDUCATION

Carnegie Mellon University — May 2028
B.S. in Computer Science, Concentration in Machine Learning — *Pittsburgh, PA*
- **Relevant Courses:** Data Structures & Algorithms, Computer Systems, Functional Programming, Discrete Math, Linear Algebra, Artificial Intelligence, Machine Learning, Computer Vision, Mobile & Web App Development

TECHNICAL SKILLS

Languages: Python, Java, C, C++, JavaScript, TypeScript, C#, SQL, HTML, CSS
Developer Tools: Git, Linux/Unix, Docker, Railway, AWS, Google Cloud Platform, Firebase, MongoDB
Frameworks & Libraries: React, Vite, Node.js, Flask, Express, Next.js, OpenCV, NumPy, Pandas, TensorFlow, Keras

EXPERIENCE

Software Engineer — Aug 2025 – Present
ScottyLabs — *Pittsburgh, PA*
- Integrating live data from Dining Services into CMUEats using React, TypeScript, and Railway, streamlining menus and specials for 10,000+ users each month across mobile and web.
- Leading the development of a geospatial routing system with JavaScript and REST APIs to rank dining locations by walking distance, resulting in a 30-50% reduction in time to find dining locations.
- Designing CI/CD workflows for 50+ developers with GitHub Actions and Docker to enforce linting and unit testing.

Software Engineer — May 2022 – Feb 2025
Vytal.AI — *Alexandria, VA*
- Developed a mobile application that analyzes ocular biometrics using OpenCV, Next.js, and MongoDB to quantify brain health in under 30 seconds.
- Optimized Python pipelines and deployed ML models on AWS EC2 to scale testing to 300+ clinical beta users.
- Implemented OCR-driven PDF parsing using Agile methodologies like sprint cycles and stand-ups, decreasing the average processing time for uploaded health records by 90 seconds.

Computer Science Research Intern — Apr 2024 – Jan 2025
Virginia Tech — *Blacksburg, VA*
- Constructed algorithms for constraint satisfaction problems in C# and Python to reduce computation time by up to 65% compared to leading recursive methods.
- Applied object-oriented architecture for graph nodes and edges to compute a valid four-coloring of the U.S. map.

Machine Learning Research Intern — Jun 2023 – Jan 2024
George Mason University — *Fairfax, VA*
- Built a web dashboard using Flask, HTML/CSS, and Matplotlib to standardized metrics for analyzing the technical performance of molecular dynamics simulations.
- Published first-author paper in the Journal of Student-Scientists' Research, amplifying real-world impact.

PROJECTS

RoutineRemind — Jun 2022 – Present
- Developing a patent-pending iOS/Android app with JavaScript, HTML, and Firebase that uses audio classification and natural language processing to help children with autism personalize daily schedules.
- Implementing secure user authentication with Firebase to manage over 200 active student and caregiver accounts.

EyeLS — Aug 2023 – Sep 2025
- Constructed an eye-tracking application with OpenCV and TensorFlow to map eye movements to click locations with 92% calibration accuracy, enabling patients with ALS to communicate non-verbally.
- Granted the IEEE Technical Excellence Award for innovating a cost-effective alternative to $15,000+ AAC devices.

LapseNet — Mar 2024 – Dec 2024
- Deployed a Python and SQL video data pipeline to train a deep learning system for real-time fall detection, achieving a 99%+ classification accuracy in training and testing.
- Recognized with the Best Presentation Award at the 6th International Conference on Robotics and Computer Vision.