Soham Jain

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

Education

Carnegie Mellon University **May 2027**
B.S. in Computer Science; Concentration in Machine Learning *Pittsburgh, PA*

- **Relevant Courses:** Data Structures & Algorithms, Computer Systems, Functional Programming, Discrete Math, Linear Algebra, Multivariable Calculus, Artificial Intelligence, Machine Learning, Computer Vision, Mobile & Web App Development

Technical Skills

Languages & Operating Systems: Python, Java, C, C++, JavaScript, HTML/CSS, TypeScript, Rust, SQL, MATLAB, Linux/Unix, macOS
Developer Tools: Git, Docker, Vim, AWS, Azure, MongoDB, Google Cloud, Firebase, Android Studio, GitHub, PostgreSQL
Libraries & Frameworks: React, Vite, Express, Django, Node.js, Next.js, Flask, NumPy, Pandas, TensorFlow, Keras, OpenCV

Experience

ScottyLabs **Aug 2025 – Present**
Software Engineer *Pittsburgh, PA*

- Utilizing **React**, **TypeScript**, and **Railway** to integrate live data from Dining Services into CMUEats, a cross-platform application that streamlines menus and specials for **10,000+ monthly users** on campus.
- Leading the development of a geospatial routing system with **Rust** and **REST APIs** to sort dining locations by walking distance.

Vytal.AI **May 2022 – Oct 2024**
Software Developer and Machine Learning Engineer *Alexandria, VA*

- Used **Tailwind**, **Next.js**, and **MongoDB** to implement a quantitative brain health assessment app at a Venture Capital-backed startup, bringing in **$1.3M+ in investments** and a **$12.5M valuation**.
- Optimized **Python** biometric pipelines and deployed ML models on **AWS EC2** to scale testing to **300+ clinical beta users**.

Virginia Tech Computer Science Department **April 2024 – May 2025**
Research Intern *Blacksburg, VA*

- Designed a quantum-classical hybrid algorithm with **Python** and **MATLAB** to address graph coloring and other boolean satisfiability (SAT) problems, **reducing computation costs by up to 65%** compared to leading models.

George Mason University Machine Learning Lab **June 2023 – Mar 2024**
Research Intern *Fairfax, VA*

- Built the first **Flask** and **HTML** dashboard to standardize metrics for analyzing molecular dynamics simulations' performance.
- **First author publication** with Dr. Christopher Lockhart in Journal of Student-Scientists' Research.

Projects

RoutineRemind | *React, JavaScript, TypeScript, Python, HTML/CSS, Firebase* **June 2022 – Present**

- Developing a **patent-pending** app with **JavaScript**, **HTML**, and **Firebase** that uses audio classification and natural language processing to enable children with autism to create personalized daily schedules.
- Scaling product to **200+ active users** through clinical partnerships and integration in local schools.
- Selected **first place in the Congressional App Challenge**; demoed app to Representatives and Senators at Capitol Hill.

EyeLS | *JavaScript, HTML/CSS, Python, TensorFlow, OpenCV* **Aug 2023 – Sep 2025**

- Constructed an eye-tracking application with **OpenCV**, **JavaScript**, and **HTML/CSS** that maps eye movements to click locations with **92% calibration accuracy**, enabling patients with ALS to communicate nonverbally while **saving $15,000+ annually**.
- Granted research stipend and **Technical Excellence Award** from IEEE (top 3 out of 300+ projects).

Research & Publications

A Transformer-Based Approach to Diagnose ALS via EEG Analysis **Feb 2025**
17th International Conference on Advanced Computer Theory and Engineering

LapseNet: Hybrid CNN-LSTM Approach for Accurate & Efficient Vision-Based Fall Detection **Nov 2024**
6th International Conference on Robotics and Computer Vision

- Recognized with **IEEE Best Presentation Award** (top 1.5% of 500+ participants).

ConVox: A Deep Learning Approach for Accurate Multilingual Voice Disorder Detection **Aug 2024**
5th International Conference on Big Data, Artificial Intelligence and Internet of Things Engineering