

Soham Jain

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Education

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

- **Relevant Courses:** Data Structures and Algorithms, Computer Systems, Functional Programming, Discrete Math, Linear Algebra, Multivariable Calculus, Artificial Intelligence, Machine Learning, Computer Vision, Mobile and Web Application 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, Amazon Web Services (AWS) EC2, MongoDB, Google Cloud, Firebase, Android Studio, PostgreSQL

Libraries & Frameworks: React, Vite, Express, Node.js, Next.js, Flask, NumPy, Pandas, TensorFlow, PyTorch, Keras, OpenCV

Work Experience

ScottyLabs Aug 2025 – Present
Pittsburgh, PA
Software Engineer

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

Vytal.AI May 2022 – Dec 2024
Alexandria, VA
Software Developer, Machine Learning Engineer

- Used **Flask**, **Next.js**, and **MongoDB** to develop a quantitative brain health assessment app via novel eye-tracking software at Venture Capital-backed startup.
- Optimized **Python** biometric pipelines and deployed ML models on **AWS EC2** to scale testing to **300+ clinical beta users**.

Virginia Polytechnic Institute April 2024 – May 2025
Blacksburg, VA
Computer Science Research Intern

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

Projects

RoutineRemind June 2022 – Present

- Developing a **patent-pending** app with **JavaScript**, **HTML**, and **Firebase** to create personalized schedules for children with autism.
- Scaling product to **200+ active users** through clinical partnerships and integration in local schools.
- Selected **first place in the Congressional App Challenge (top 4%)**; demoed app at Capitol Hill.

EyeLS Aug 2023 – Sep 2025

- Constructed a gaze-tracking application that maps eye movements to click locations with **92% calibration accuracy**.
- 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

RexDash: A Dashboard for Analyzing Replica Exchange Molecular Dynamics Simulations Oct 2023
Journal of Student-Scientists' Research (George Mason University Computer Science Internship)