

Soham Jain

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Education

Carnegie Mellon University

Bachelor of Science in Computer Science

December 2027

Pittsburgh, Pennsylvania

- **Concentration:** Machine Learning
- **Relevant Courses:** Data Structures and Algorithms, Artificial Intelligence, Applied Machine Learning, Discrete Math, Linear Algebra, Multivariable Calculus, Computer Vision, Mobile & Web Application Development, Research Statistics, Physics, Biology, Psychology

Technical Skills

Languages: Python, Java, C++, C/C0, JavaScript, SQL, HTML/CSS, TypeScript, Q#, LaTeX

Developer Tools: Git, Vim, VS Code, MongoDB, Google Cloud, AWS, Azure, Firebase, Jira, Android Studio, Jupyter Notebook, Figma

Libraries & Frameworks: React, Node.js, Next.js, Flask, PostgreSQL, NumPy, Pandas, TensorFlow, PyTorch, Keras, Scikit-learn, OpenCV

Experience

Vytal.AI

Software and Machine Learning Engineer

May 2022 – June 2025

Alexandria, Virginia

- Developed a smartphone AI application to quantify brain health using novel gaze-tracking algorithms
- Designed a scalable business model to secure \$1.2M in seed investments and a \$12.5M valuation at YC-backed startup
- Refined biometric feature extraction pipelines to scale testing from research prototypes to clinical beta with 300+ users

Virginia Tech Department of Computer Science

Computer Science and Quantum Computing Researcher

April 2024 – May 2025

Blacksburg, Virginia

- Spearheaded undergraduate research with Dr. Atul Mantri on graph coloring with Grover's Algorithm

Projects

RoutineRemind

June 2022 – Present

- Developed provisional patented scheduling app for individuals with speech and cognitive disabilities
- Deployed on Google Play and App Store; selected by U.S. Representative Jennifer Wexton

CMUEats

Aug 2025 – Present

- Something

EyeLS

August 2023 - Present

- Project description

Research & Publications

LapseNet: A Hybrid CNN-LSTM Approach for Accurate and Efficient Vision-Based Fall Detection

6th International Conference on Robotics and Computer Vision (ICRCV)

- Designed a lightweight neural network model to detect indoor falls with **99%+ accuracy** in training and testing
- Earned the **IEEE Best Presentation Award** for exceptional oral and poster presentation (**top 1.5%** of 500+ participants)

A Transformer-Based Approach to Diagnose ALS via EEG Analysis

17th International Conference on Advanced Computer Theory and Engineering (ICACTE)

- First-author on paper introducing a Transformer to diagnose ALS in two minutes

RexDash: A Dashboard for Analyzing the Performance of Replica Exchange Molecular Dynamics Simulations

Journal of Student-Scientists' Research

- First-author publication with Dr. Christopher Lockhart at George Mason University

Leadership

Youth International Digambar Jain Organization

February 2022 - Present

President and Co-Founder

- Leadership achievement or responsibility