

# 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 quantifying brain health using novel gaze-tracking algorithms
- Designed scalable business model, securing \$1.2M in seed investments (\$12.5M valuation)

### Virginia Tech

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
- Conducted literature reviews to identify gaps in contemporary quantum computing research

## 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)

- Best Presentation Award

### A Transformer-Based Approach to Diagnose ALS via EEG Analysis

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

- First-author paper on diagnosing 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