

# Soham Jain

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## Education

### Carnegie Mellon University

December 2027

*B.S. in Computer Science, School of Computer Science*

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

## Experience

### Machine Learning and Software Engineer | Vytal.AI

May 2022 – June 2025

- Developed NeurOS, 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)

### Computer Science and Quantum Computing Researcher | Virginia Tech

April 2024 – June 2025

- Led undergraduate research team with Dr. Atul Mantri on graph coloring with Grover's Algorithm
- Conducted literature reviews to identify gaps in contemporary quantum computing research

## Projects

### RoutineRemind | Congressional App Challenge Winner

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

### EyeLS | IEEE Technical Excellence Award (3/400+ projects)

Aug 2023 – Present

- Built gaze-tracking web app for ALS patients using Kalman Filtering and Monte Carlo algorithms

### President & Co-Founder | Youth International Digambar Jain Organization

Feb 2022 – Present

- Raised over \$25,000 for constructing a Jain temple in Virginia; manage organization website

## Research & Publications

### LapseNet: A Hybrid CNN-LSTM Approach for Vision-Based Fall Detection | IEEE

Conference

First-author publication. Best Presentation Award at 6th International Conference on Robotics and Computer Vision

### RexDash: Dashboard for Replica Exchange Molecular Dynamics Simulations | JSSR

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

### Transformer-Based ALS Diagnosis via EEG Analysis | IEEE ICACTE

First-author paper on diagnosing ALS in two minutes. Oral presentation at 17th International Conference

### ConVox: Deep Learning for Voice Disorder Detection | IEEE IC-BAIE

First-author paper. Multilingual voice disorder detection model accepted at 5th International Conference

## Honors & Awards

### Congressional App Challenge Winner (VA-10) | Meta Hacker Cup Round 2

Qualifier (Top 10% of 20,000+) | 5x Devpost Hackathon Winner | IEEE Technical

Excellence Award | IEEE Best Presentation Award

## Technical Skills

**Languages:** Python, Java, JavaScript, TypeScript, C++, C, SQL, R, MATLAB, HTML/CSS

**Frameworks & Tools:** React, React Native, Node.js, MongoDB, Firebase, TensorFlow, PyTorch, Keras, Scikit-learn, Pandas, Git, Google Cloud