Soham Jain

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Education

Carnegie Mellon University **December 2027**

B.S. in Computer Science – Concentration in Machine Learning

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

Technical Skills

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

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

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

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**