

Soham Jain

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Links

[Personal Website](#)

[LinkedIn](#)

[GitHub](#)

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Courses

Principles of Imperative
Computation

Mathematical Foundations
for Computer Science

Matrix Algebra

Interpretation and Argument

Programming Languages

Python C++

Java Q#

JavaScript C0

SQL TypeScript

MATLAB R

Mobile/Web Dev

HTML/CSS

React Native

Android Studio

Bootstrap

Backend Dev

Node.js

MongoDB

Google Cloud

Firebase

AI & Machine Learning

TensorFlow

PyTorch

Keras

Pandas

Scikit-learn

Languages

English • Proficient

Spanish • Proficient

Hindi • Proficient

Profile

Ambitious computer scientist with a passion for software development and artificial intelligence. Leveraging interpersonal skills and technical proficiency to innovate modern solutions to real-world problems.

Education

Carnegie Mellon University | Pittsburgh, PA

Pursuing B.S. in the School of Computer Science. Graduating 2028.

Thomas Jefferson High School for Science and Technology | Alexandria, VA

4.535 Weighted GPA | 4.0 / 4.0 Unweighted GPA

Captain of Congressional Debate; Student Government Association Policy Specialist & Executive Committee.

Work Experience

Machine Learning and Software Engineer, Vytal.AI | May 2022 - June 2025

Developed NeurOS, a smartphone AI application that quantifies brain health using novel gaze-tracking algorithms. Helped design a scalable business model, successfully securing \$1.2 million through seed investments (\$12.5 million valuation).

Computer Science and Quantum Computing Researcher, Virginia Tech | April 2024 - June 2025

Led a team of undergraduate students alongside Dr. Atul Mantri on project regarding graph coloring with Grover's Algorithm. Conducted literature reviews to identify gaps in contemporary research.

Projects

RoutineRemind | June 2022 - Present

Developing provisional patented, utility patent-pending scheduling application for individuals with speech and cognitive disabilities. Deploying a mobile application on Google Play and the App Store.

EyeLS | August 2023 - Present

Constructing a gaze-tracking web application for ALS patients to communicate nonverbally by implementing Kalman Filtering and Monte Carlo algorithms. Granted IEEE Technical Excellence Award (3/400+ projects).

President and Co-Founder, Youth International Digambar Jain Organization | February 2022 - Present

Teach Jain principles like *ahimsa* (non-violence) and peace through educational programming. Raised over \$25,000 for constructing a Jain temple in Virginia. Direct youth community service initiatives. Manage website.

Research & Publications

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

First-author IEEE publication in the 6th International Conference on Robotics and Computer Vision. Received Best Presentation Award for exceptional oral presentation of paper.

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

Spearheaded machine learning and replica exchange molecular dynamics research with Dr. Christopher Lockhart at George Mason University. First-author publication in Journal of Student-Scientists' Research.

A Transformer-Based Approach to Diagnose Amyotrophic Lateral Sclerosis via Electroencephalogram Analysis

First-authored independent research paper on diagnosing ALS in two minutes. Published in the 17th International Conference on Advanced Computer Theory and Engineering. Delivered oral presentation.

ConVox: A Robust Deep Learning Approach for Accurate Voice Disorder Detection with Multilingual Capabilities

First-authored paper accepted in the 5th International Conference on Big Data, Artificial Intelligence and Internet of Things Engineering. Constructed a model capable of diagnosing voice disorders in three different languages.

Honors and Awards

Congressional App Challenge Winner from VA-10

Selected first place by U.S. Representative Jennifer Wexton for mobile app development project. Featured on House.gov and national news outlets. Invited to demo application at Capitol Hill in front of Congressional leaders.

Meta Hacker Cup Round 2 Qualifier

Ranked within the top 10% internationally and top 100 in the US while competing against 20,000+ software developers.

5x Devpost Hackathon Winner