Saanvi Chugh

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EDUCATION

Johns Hopkins University — Baltimore, MD
Bachelor of Science (GPA: 3.85) | Major in Computer Science, Minor in Computer-Integrated Surgery — Expected May 2029
- Relevant Courses: Intermediate Programming (C & C++), Data Structures, Mathematical Foundations of CS, Linear Algebra

Ashland High School — Ashland, MA
High School Diploma (GPA: 4.446) — June 2025

EXPERIENCE

Student Researcher — Baltimore, MD
MIRACLE Lab, Johns Hopkins University — January 2026 - Present
- Apply reinforcement learning techniques to improve safety and precision in surgical robotic systems

Advising Fellow — Baltimore, MD
Matriculate — December 2025 - Present
- Mentor 3-4 first-generation & low-income high school students weekly over a 1.5-year period, providing personalized guidance throughout complete college application and decision process
- Trained in college advising topics including financial aid, application strategy, and essay writing

Software Intern — Ashland, MA
Clear Dental — June 2025 - August 2025
- Developed a SIP-based softphone application using JavaScript and WebSockets to enable real-time handling of patient calls through a web interface
- Managed front desk operations at Zen Family Dental with 2 receptionists, scheduled patient appointments, and assisted in procedures as a Dental Assistant In Training

Research Intern — Providence, RI
Automatic Coordination of Teams Laboratory, Brown University — August 2023 - January 2025
- Led an independent swarm robotics research project, alongside Assistant Professor in Computer Science
- Utilized Python to design, implement, and compare unique heuristic methods of Conflict-Based Search, a Multi-Agent Pathfinding algorithm
- Published research paper in the **National High School Journal of Science** (July 2025)

PROJECTS

Coursework Projects, Intermediate Programming — Fall 2025
- Image Processor (C): Supports grayscale conversion, blending, cropping, blurring, rotation, and pointillism effects
- Chess Game (C++): Built a playable chess game applying object-oriented design principles

Image Reconstruction using EEG Data, Brain-Computer Interface Society — November 2025 - Present
- Implementing preprocessing pipelines, in Python, to de-noise and prepare data for an image-reconstruction neural network

Autonomous Drone, MIT BeaverWorks — July 2024 - August 2024
- Applied Computer Vision, State Estimation, ROS2, and Control Algorithms to enable autonomous drone navigation
- Collaborated with 5 teammates to design, program, and deploy an autonomous air vehicle

ACTIVITIES

- Women in Computer Science (Events Committee): Brainstorm and organize workshops and social events to foster a supportive community for women in technology at JHU
- JHU Club Gymnastics: Dedicated teammate working toward upcoming competitions

SKILLS

- Technical: Python, C, C++, Java, JavaScript, TypeScript, Machine Learning, Linux, ROS2, Git, UI Development
- Language: English (Native), Hindi (Native), Spanish (Basic)