Himansh Chitkara

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EDUCATION

Georgia Institute of Technology — Atlanta, GA
Bachelor of Science in Computer Engineering, GPA - 4.00 — *Aug 2024 - Dec 2027*
Coursework: Data Structures & Algorithms, Object Oriented Programming, Object Oriented Design, Design & Analysis of Algorithms, Programming Hardrware/Software Systems, Digital System Design, Honors Linear Algebra

EXPERIENCE

Teaching Assistant - Discrete Math for CS — Aug 2025 - Present
College of Computing, Georgia Institute of Technology — *Atlanta, GA*
- Mentored 200+ students in logic, proofs, set theory, number theory, & probability
- Led weekly content reviews, exam reviews & held office hours supporting 30+ students with individual guidance
- Collaborated with faculty and other TAs to develop course material and grade 100+ assignments/exams weekly

Software Engineer - Intelligent Vision & Automation Lab — Aug 2025 - Present
Georgia Institute of Technology — *Atlanta, GA*
- Developing features for a web app that provides indoor navigation for individuals with disabilities, including AR-based guidance and precise route visualization.
- Contributing to the translation of MATLAB image-processing pipelines into Python to generate accurate indoor floor plans from robot-collected mapping data.

Lead Software Engineer — July 2023 - Dec 2023
Lodha Pharmacy (Freelance) — *Mumbai, India*
- Developed & deployed a Flask + SQLAlchemy web platform with multi-role authentication, streamlining 100+ pharmacy inventory and order operations
- Automated PDF reporting and integrated email notifications, cutting manual report prep time by 70% and boosting order efficiency.
- Engineered a responsive HTML/CSS/JavaScript frontend and optimized SQLite backend, enhancing usability across devices and ensuring reliable performance under concurrent operations.

PROJECTS

EchoesAI | *React-Native, Expo, Supabase (pgVector), AssemblyAI, Gemini, RAG Pipeline* — July 2025 - Present
- Engineered a mobile journaling app that transcribes and embeds daily memories, enabling a RAG-based LLM therapist to deliver personalized, context-aware mental health support.
- Integrated AssemblyAI speech-to-text with Supabase and pgvector, implementing cosine-similarity search over Gemini-generated embeddings to retrieve past experiences.
- Architected a scalable RAG pipeline with Gemini Flash 1.5, ensuring reliable, context-grounded guidance; app currently in final testing ahead of App Store launch.

PomoFlow | *HTML, CSS, JavaScript, BlazeFace.js, chrome APIs* — June 2025 - July 2025
- Engineered a modular Chrome Extension (Manifest V3) with a persistent Pomodoro core, background service isolation, and dynamic website blocking; currently in beta on the Chrome Web Store.
- Integrated a bundled BlazeFace.js model via offscreen documents for on-device inference, enabling a privacy-first, low-latency focus detection pipeline that adapts timer behavior in real time.

SafeSnap | *HackGT 11: Circus of Inventions* | *Java Script, Snapchat Lens Studio* — Sept 2024
- Won 2nd Place (Emerging Hacks) and 4th Place (Best SnapAR Lens) for an AR disaster-response simulation on SnapAR Spectacles, integrating 3D LiDAR scans in Lens Studio for real-time safe zone overlays.
- Implemented WebGL-based object detection and hazard simulation, delivering low-latency visual and audio guidance during earthquake scenarios.

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, TypeScript, HTML/CSS, SQL, MATLAB, Kotlin
Frameworks: Node.js, Flask, JUnit, Streamlit, React-Native, Expo, Google Firebase, Supabase
Developer Tools: Git, VS Code, PyCharm, IntelliJ, AutoDesk TinkerCAD, Snapchat Lens Studio