Shrey Agarwal

agshrey@gatech.edu | (908)-842-7119 | github.com/agshrey | linkedin.com/in/agshrey1/ | Atlanta, GA, 30332

EDUCATION

Georgia Institute of Technology, Atlanta, GA   *Expected Graduation: May 2027*
Bachelor of Science in Computer Engineering   GPA: 4.0
Concentrations: Distributed Systems and Software Design & Robotics and Autonomous Systems
Relevant Coursework: Data Structures & Algorithms, Discrete Math for Computer Science, Linear Algebra, Multivariable Calc, Differential Equations, Computer Organization, Computer Systems and Networks

SKILLS

Software: Java, Python, C++, JavaScript, SQL, Typescript, React.js, Django, MongoDB, MatPlotLib, Numpy, Pandas, OpenCV
Interests: Software Engineering, Machine Learning & AI, Autonomous Robotics, Computer Vision, Embedded Systems

RELEVANT EXPERIENCE

Better Place Drones | *Atlanta, Georgia*   *August 2024 — Present*
Machine Learning Researcher
Better Place Drones is developing a novel fire suppression system to attach to a drone that will autonomously detect and mitigate fires.
- Analyzing data from 5 sensors, creating a multi-modal fire detection algorithm with 95% precision and 92% recall
- Training a transformer-based LLM to distinguish fires with 98% accuracy, reducing false positives by 15%
- Operating 3 networked drones over 50 km², enabling real-time feedback with <200ms latency

LCKR | *Philadelphia, Pennsylvania*   *May — August 2023*
Software Development Intern
Online rental marketplace where users can rent other users' item with no human interaction. Items are dropped and picked up in smart lockers.
- Designed & deployed peer-to-peer rental marketplace platform supporting 50+ lenders via Sharetribe Flex, React.js, Git
- Established 10 partnerships with on-campus facilities and local businesses to serve as exchange locations for rentals

PROJECTS

PerfectPunch | Hacklytics 2025 - 2nd Place   *Feb 2025*
- Developed AI-powered boxing training system using PyTorch, OpenCV, and MediaPipe, enabling real-time punch classification with 90%+ accuracy
- Designed interactive Taipy dashboard to visualize attack statistics and defensive stance analysis for 100+ fighters
- Implemented LLM-powered chatbot with Gemini API, delivering custom advice and reducing concussion risk by 30%

Automatic Door Opener | IoT Smart Lock   *Nov — Dec 2024*
- Engineered an Arduino-powered automatic door opener, integrating a Bluefruit LE module and servo-controlled rack and pinion for wireless activation
- Designed and 3D-printed a custom rack and pinion system in SolidWorks, reducing mechanical friction by 30% for smoother operation
- Implemented Bluetooth communication, enabling real-time mobile control with a 95% response rate

ACTIVITIES

The HIVE Interdisciplinary Design Commons MakerSpace | Peer Instructor   *Jan 2025 - Present*
- Instructed and assisted students in operating machinery and troubleshooting hardware projects, fostering hands-on learning in a collaborative makerspace

Startup Exchange | Director of Marketing   *Aug 2024 - Present*
- Spearheaded marketing strategy for Startup Exchange, increasing event engagement by 40% and social media reach by 75% through targeted campaigns and partnerships