

ANMOL RATTAN SINGH SANDHU

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EDUCATION

- **Olin College of Engineering / Bachelor of Science in Computer Science** *Needham, MA | May 2025*
 - CGPA: 3.85 / 4.00
 - Relevant Coursework: Data Structures and Algorithms, Advanced Algorithms, Software Systems, Computational Introduction to Robotics, Neurotechnology – Brains and Machines, Data Science
- **Additional Courses/ Representations**
 - Azure Cloud Fundamentals, Microsoft AZ-900
 - Summer Program with AwesomeMath, Cornell University
 - National level Workshop on AI (AI•Thon) conducted in collaboration with Intel

SKILLS

- Python, Go, C, C++, C#, JavaScript, SQL, Java, Dart, R, Bash
- Git, Unity, Linux, Firebase, ROS, MATLAB, React.js, Flutter, SolidWorks

EXPERIENCE

- **Full Stack Developer Intern, Community Knights** *Jun – Aug 2023*
 - Developing a **ride-sharing services platform** with a focus on accessibility and inclusivity for individuals with disabilities in collaboration with the non-profit organization Community Knights.
 - Worked on an admin dashboard over the summer, enabling administrators to efficiently match ride requests with volunteer drivers.
 - Utilized **ReactJS**, **Firebase**, and **Ant Design** to create a full-stack web application. Added **CRUD** capabilities using the **Firestore NoSQL** database. Integrated **Google Maps** for mapping, navigation, and location search functionalities.
 - Conducted **UX design** interviews with Community Knights' administrators to iteratively improve the usability, functionality, and overall experience of the dashboard.
- **Researcher, Affordable Design and Entrepreneurship, Olin College** *Jun – Aug 2023*
 - Building data tools to assist public defenders mitigate possible convictions due to incidents of unlawful traffic stops resulting from racial profiling.
 - Automated the generation of statistical PDF reports of traffic stop records using **quarto**. These reports will be added to the new police accountability database of the Strategic Litigation Unit in the Committee for Public Counsel (CPCS).
 - Utilized **GitHub** pull requests to implement streamlined code integration and review processes.
 - Conducted data analysis in **Python** using frameworks such as **pandas**, **numpy**, and **Jupyter**.
 - Built extensive testing frameworks using **pytest** for sensitive data cleaning functions used in parsing thousands of traffic stop records.
- **Researcher, Olin College Crowdsourcing and Machine Learning Lab** *Feb 2022 – May 2023*
 - Created pipeline to benchmark image matching algorithms on data collected from 50+ co-designers for the Clew app, which is a path retracing app for blind and visually impaired users.
 - Added **Protobuf** support for data logging using **Firebase** for the Clew **iOS** application.
 - Used **Python** to develop **LiDAR** based infrastructure to benchmark various algorithms including the **SuperGlue** neural network and **OpenCV** image matching algorithms.
 - Currently working on a Visual Simultaneous Localization and Mapping (**SLAM**) system to allow continuous re-alignment during navigation.