

EDUCATION

Bachelor of Science in Computer Science, Olin College of Engineering Aug 2021 – May 2025

- CGPA: 3.88 / 4.00 Coursework: Data Structures, Advanced Algorithms, Software Systems, Computational Robotics, Neurotechnology and Machine Learning, Data Science, Discrete Math, Collaborative Design, Computer Architecture, Longer Term Software Development

SKILLS

- Python, Go, C, C++, Bash, Kotlin, JavaScript, SQL, Java, Dart, R
- Git, Github, Linux, Firebase, React.js, React Native, Ansible, Docker, ROS, MATLAB, AZ-900

EXPERIENCE

Intern, Modular Open-Source Identification Platform (MOSIP) Jan 2024 – Present

- Working on [INJI](#), a decentralized mobile wallet from MOSIP. Enables users to download, manage, share, verify OpenID conforming **verifiable credentials**.
- [MOSIP](#) is an open-source version of the [Aadhaar Technology Stack](#), has helped issue digital IDs for more than **100 million people**, revolutionizing the delivery of social services and retail payments.
- Improved the **open-source** Bluetooth credential exchange module called Tuvali, allowing a presenter to scan and view a list of verifiers, enhancing the previous process of scanning QR codes to connect to verifiers.
- Acquired in-depth knowledge of the **Bluetooth LE** exchange processes and their secure implementation.

Research Assistant, MIT CSAIL

Jun 2024 – Aug 2024

- Worked in the FutureTech lab on the Algorithm Wiki project, a comprehensive online resource for algorithms.
- Helped start a new project focusing on cataloging machine learning algorithms, conducting **literature reviews**, and surveys to classify **machine learning** problems.
- Acquired a comprehensive understanding of various ML methods to classify them effectively and develop metrics for quantifying progress in machine learning.

Research Assistant, MIT Connection Science

Jan 2024 – Present

- Exploring the domain of **verifiable credentials** (VCs) and **personal data stores** to develop solutions for data privacy and security in the data-rich modern world.
- Helped further my work with MOSIP to create large-scale solutions for digital trust ecosystems.

Full Stack Developer (Volunteer), Community Knights

Jun 2023 – Present

- Collaborated with Community Knights to develop an accessible ride-sharing platform for individuals with disabilities, including an admin dashboard and mobile apps for riders and drivers.
- Utilized **ReactJS**, **Firebase**, **Ant Design**, and **React Native**, to create applications with **CRUD** operations, **role-based authentication**, security protocols, and Google Maps integration.
- Conducted **UX design** interviews with Community Knights' administrators to iteratively improve the usability, functionality, and overall experience of the dashboard.

Research Assistant, Olin College Crowdsourcing and Machine Learning Lab

Jun 2022 – Aug 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.

Research Assistant, Affordable Design and Entrepreneurship, Olin College

Jun 2023 - 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 for traffic stop records using **Quarto**. These reports will be added to the new police accountability database for the Committee for Public Counsel Services (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.

PROJECTS

- [Clipboard-Transformer](#): a simple tool to transform text in your clipboard. Implemented in **C++**.
- [Multiagent Search and Rescue](#): Centralized multiagent system designed to efficiently search a space to find a target. Built in **ROS** and **Python**.
- [CNN-MNIST](#): Convolutional **Neural Network** to classify handwritten digits from the **MNIST** dataset. Implemented using only **NumPy** and **Python**.
- [Simulated Annealing Sudoku Solver](#): Python implementation of the Simulated Annealing algorithm to solve Sudoku puzzles.