

Karshin Sachdeva

karshinsachdeva@gmail.com • 404-615-1579 • <https://github.com/karsh-s> • <https://www.linkedin.com/in/karshin-sachdeva/>

EDUCATION

Georgia Institute of Technology, Atlanta, GA
Bachelor of Science in Computer Science

May 2029
GPA: 4.0/4.0

EXPERIENCE

Georgia Institute of Technology - Big Data Big Impact
Machine Learning Developer

Aug 2025 – Present
Atlanta, Georgia

- Developed a (2+1) D CNN using PyTorch and NumPy to classify boxer punch types from video data and provide punching form analysis
- Processed spatiotemporal data provided by MediaPipe and optimized performance using deep learning frameworks

Georgia Institute of Technology - RoboJackets
Software Team Member

Aug 2025 – Present
Atlanta, Georgia

- Improved inter-robot communication using C and enhanced robot dribbling performance with real-time control logic
- Debugged ROS2-based software to allow for the use of RQT tools and robot controllers in virtual machine environments

Learning Dimensions Network
Junior Tech Specialist

Aug 2023 – Dec 2023
Melbourne, Australia

- Digitized and streamlined scalable digital systems to transition in-person workshops to fully remote delivery
- Developed adaptive solutions and adaptive solutions that enhanced virtual workshop performance and was supported in nationwide deployment

Swinburne University of Technology
Research Leader

Aug 2022 – Dec 2023
Melbourne, Australia

- Designed and optimized experiments on microgreen fertility in zero gravity conditions after extensive data analysis
- Developed an experiment using 25 vials that were sent to the International Space Station (ISS) before results were analyzed
- Mentored a research initiative about mycelium-based infrastructure which featured cross-disciplinary collaboration. This was sent to the ISS and was featured in two documentaries.

PROJECTS AND LEADERSHIP

Music for the Hearing-Impaired

Mar 2021 – Present

- Engineered physical wristband prototype with the Raspberry Pi that converts WAV files into haptic vibrations through a motor controller and stepper motors in Python. Developed an accompanying iOS app using Swift and Xcode.
- Programmed a webapp interface for the wristband that interacted with over 1000 active participants from the Auslaners Deaf Community

Senior Citizen Mobility App

Mar 2024 – Dec 2024

- Programmed a webapp using HTML, CSS and JavaScript that allows senior citizens to personalize their shopping experience when navigating malls
- Designed an approach to tackle the Travelling Salesman Problem using graphing algorithms like A*, Dijkstra and simulated annealing to optimize time complexity

Kode., Melbourne, Australia – *Founder*

Jan 2024 – Jun 2025

- Crafted a syllabus and taught local middle schoolers web development with HTML, CSS and JavaScript and Python programming with a specialization in graphing algorithms
- Successfully delivered free online holiday programs to an international audience from India and Canada
- Assisted students with project development in a national digitech club

Haileybury Leadership Committee, Melbourne, Australia – *Senior Leader*

Nov 2023 – Dec 2024

- Hosted several academia and sports-based events with 50+ in attendance to raise \$4,000 for the Leukemia Foundation
- Organized and spoke at a 110+ person STEM conference whilst leading a 25+ person STEM committee

RELEVANT SKILLS

- **Software** – PyTorch, NumPy, Qiskit, React, ROS2, RQT, Git
- **Programming** - Java, Python, JavaScript, C/C#, x86 Assembly, CAD, Swift, HTML/CSS
- **Languages** – English, Hindi
- **Relevant Coursework** – Object Oriented Programming, Data Structures & Algorithms, Linear Algebra, Computer Organisation and Programming, Engineering Numerical Analysis