

# Keerath Singh

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## EDUCATION

### McMaster University

*Bachelor of Mechatronics Engineering*

Hamilton, On

*Sept. 2023 – April. 2027*

## TECHNICAL SKILLS

**Languages:** Java, Python, C, Kotlin, Swift, Matlab, JavaScript, HTML/CSS,

**Developer Tools:** Git, Inventor, Ansys Granta Edu, Arduino IDE, Android Studio, Visual Studio, IntelliJ, Eclipse, Next.js, Linux

## PROJECTS

### Mocha | *Android Studio, Kotlin, Jetpack Compose, Room DB*

- Developed an Android to-do list application using Kotlin in Android Studio, focusing on efficient task management and a user-friendly interface.
- Leveraged Room Database to optimize data storage and retrieval
- Designed the user interface using Jetpack Compose, enabling a modern and responsive user experience.
- Gained a thorough understanding of the Android activity life-cycle, achieved smooth transitions and resource management within the app.

### RC HoverCraft | *Arduino IDE, Arduino C++, HTML, CSS*

- Designed a wiring schematic for the RC hovercraft, ensuring accurate connections between the Arduino, motors, fans, and other components.
- Programmed the Arduino to control the hovercraft's movement, integrating wireless communication through an online server.
- Constructed a custom frame to house the electronics and maintain balance during operation.

### Robotic Arm | *PyCharm, Python, Raspberry Pi*

- Automated sorting tasks by developing Python code for the Quanser Q-arm robotic system, increasing sorting speed by 40% and reducing error rates by 20%.
- Designed and tested robotic system workflows in a digital environment using PyCharm for code development and simulation
- Integrated sensor feedback and motion planning to ensure precise and accurate robotic arm movements in a real-time environment

## EXPERIENCE

### Our Wave Hub

June 2022 – August 2022

*High School Internship*

- Developed proficiency in Swift programming to design and build iOS applications
- Achieved a comprehensive understanding of the app development life cycle, from concept to deployment
- Created wire-frames and UI/UX designs for app interfaces, ensuring user-friendly experiences.

### FRC Robotics Team Mentor

Sep. 2018 – Present

*Team 4992*

*Milton, ON*

- Led design and assembly of a provincial champion robot using Autodesk Inventor for CAD modelling.
- Conducted safety training sessions for 40+ team members, covering workshop best practices.
- Collaborated with students in-game strategy and robot functionality development.

### Mark's Sales Associate

July 2023 – October 2023

*Mark's Canada*

*Milton, ON*

- Assisted customers with product selection and provided excellent service.
- Managed transactions accurately and handled customer inquiries.
- Maintained store appearance and stock levels to ensure a positive shopping experience.

## RELEVANT COURSEWORK

Data Structures and Algorithms for Mechatronics, Programming in C, Embedded Systems Design, Analog and Digital Circuits, Dynamics, Statics, Thermodynamics

by April 2025