

# Dharav Shah

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## EDUCATION

### McMaster University

September 2023 – April 2027

- Honours Software Engineering Co-op, B.Eng (**3.9 GPA**)
- Achievements: Entrance scholarship for exceptional performance | Deans Honours list | The McMaster University Award of Excellence | **2nd Place at MacEngComp 24**
- Courses: Data Structures & Algorithms | OOP | Development Basics (git, bash, C) | Linear Algebra

## TECHNICAL SKILLS

**Languages:** Python, Swift, java, SLRUM, C, C++, JavaScript, Html, Bash, Verilog, MATLAB, Ruby, Markdown, YAML, UML, PowerShell

**Web Development:** HTML, CSS, React.js, Node.js, .Net

**Technologies, Tools and Hardware:** AWS, Azure, TensorFlow, Jupyter Book, GitHub, Firebase, Linux, Unix, Maven, Vim, Arduino, Altera FPGA.

**Libraries:** TensorFlow, Matplotlib, NumPy, Pandas, PyTorch, OpenCV

**Other Skills:** CUDA, SLURM for GPU Job Scheduling, SSH and Remote GPU Cluster Access, GitHub Actions, AutoCAD, Metalworks, Quanser, Project Management, Data Analysis, logic design

## EXPERIENCE

### IOS App Developer Co-op

September 2022 – February 2023

#### Apple/Swift kids (Remote)

- Developed and presented an [IOS app](#) using **Swift Sprite Kit** at **Apple's App Showcase**, demonstrating technical aptitude and problem-solving capabilities
- Designed and animated **optimized sprites** for **greatly improved performance**
- Gained practical experience in **technical project management** and delivering **innovative solutions**

### Software Engineer, GIS and, Maps Assistant

April 2024 - Current

#### McMaster University, Mills library

- Developed [Data Analysis Python Scripts](#) and educational tutorials on behalf of [McMaster Dash](#) using SciPy, Pandas, Matplotlib, and Jupyter Book
- Developed python [scripts](#) to **migrate legacy map metadata** to modern formats

## PROJECTS

### Cybersecurity System *Technologies:* Python (OpenCV, Flask, Cryptography), SQL

- Designed and tested a robust [cybersecurity system](#) integrating **facial recognition**, a **password manager**, and **file encryption** capabilities
- Implemented **strong encryption protocols** to safeguard user credentials and sensitive data
- Achieved **2nd** place among **30+ teams** at **MacEngComp 24**, recognized for real world applicability
- Functional product was created within a **7-hour phase** starting from scratch

### RecycloBot *Technologies:* Python (OpenAI, OpenCV,), C++ (Arduino), Swift (Firebase)

- Built [Ai Waste Management System](#) with dual servo motors for **automated separation**
- Achieved **90% sorting accuracy** in testing and demos
- Created a Firebase-integrated **Swift app** with **live updates**, **leaderboards**, and an **AI chatbot** on environmental topics

### Employee Authenticator *Technologies:* AWS, React

- Developed a [facial recognition-based](#) **employee authentication system** using AWS Rekognition to verify user identities
- Built a **React frontend** that interacts with AWS services for **real-time authentication**
- Implemented serverless backend utilizing **S3, Lambda, DynamoDB, API Gateway**, and **CloudWatch**