

Harshil Modi

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LINKS

Website://harshilmodi.com

Github://harshilmodi10

Linkedin://modiharshil

EDUCATION

MCMASTER UNIVERSITY

B.ENG IN SOFTWARE ENGINEERING
& BIOMEDICAL ENGINEERING

Expected April 2022 | Hamilton, ON

GPA: 3.95

Awards

Computer Science Excellence in
Problem Solving Award

Motorola Software Engineering
Scholarship

Aspiring Engineer Scholarship

McMaster University President's Award

Pollock Family Academic Scholarship

McMaster Dean's List

COURSEWORK

Data Structures & Algorithms (A+)

Discrete Mathematics (A+)

Principles of programming Java (A+)

Principles of programming C (A)

(Current Courses)

Computer Architecture

Distributed Systems

Linear Optimization

Activities

Artificial Intelligence Society

Competitive Programming Club

Hack the North (Hackathon)

SKILLS

LANGUAGES

Proficient: Python, Java

Intermediate: C++, C, JavaScript

TECHNICAL SKILLS

- Git
- Database Management
- Web/mobile development
- Distributed systems

EXPERIENCE

FORTNAN TRAFFIC SYSTEMS | FULL STACK DEVELOPER INTERN

Apr 2019 - Aug 2019 | Toronto, ON

- Deployed **prediction and analysis algorithms** on a regional scale under *smart traffic initiatives* to improve traffic flow. Exceeded expectations by finishing project in ½ the given time.
- Optimized, refactored, and converted 100+ **XML files** to protocol buffer files leading to a 60% reduction in transfer time.
- Implemented a web application using **Python-Flask** and **MongoDB** for real-time simulation of 50+ traffic intersections.

Languages/Tools: Python, C++, JavaScript, MongoDB

CHAT AUTOMATE | SOFTWARE DEVELOPER

Nov 2017 - Apr 2019 | Toronto, ON

- Designed and productionized companies first **voice recognition chatbot** resulting in **\$25,000** a year in revenue.
- Built company website which directly increased client base by 60% and sponsorship by 20%.
- Developed databases, stored procedures, reports and data entries to **MS SQL Server**.

Languages/Tools: Python, SQL, TensorFlow

SUNNYBROOK HOSPITAL | SOFTWARE ENGINEERING INTERN

May 2018 - Aug 2018 | Toronto, ON

- Individually developed software for identifying cancerous cells; Received publication in **Biology Open Journal**.
- Implemented a cell identification classifier using **OpenCV** and **NLTK** with 85% accuracy. Outperformed a human with 75% accuracy.
- Built shell scripts to automate data analysis and improve processing time by 30%. Scripts still used by a team of 8 doctors and scientists.

Languages/Tools: Java, OpenCV, NLTK, Shell

SELECTED PROJECTS

TWITTER FAKE NEWS TRACKER

Feb 2019 | Toronto, ON

- Visually depicted tweet and retweet proliferation across 500,000 twitter users using graphing library iGraph.
- Implemented **Hybrid Bellman-Ford-Dijkstra's** algorithm to improve run time bound by 17%.

Languages/Tools: Java, Python, MongoDB

IMAGE RECREATION WITH GENETIC ALGORITHM

Nov 2018 | Toronto, ON

- Developed algorithm to generate identical images from random pixels using genetic algorithm, achieved 87% accuracy.
- Implemented an **exponentially decaying adaptive learning rate** to decrease average run time by 12%.

Languages/Tools: C, Bash, iGraph