

# Prajval Malhotra

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## Education

### University of Waterloo

BACHELOR OF COMPUTER SCIENCE, DIGITAL HARDWARE SPECIALIZATION

Waterloo, Ontario

August 2020 - July 2024

- **Term 1A** - Designing Functional Programs, Linear Algebra, Calculus 1
- **Term 1B** - Elementary Algorithm Design and Data Abstraction, Digital Circuits and Systems Linear Algebra 1, Calculus 2
- **Term 2A** - Fall 2021

## Skills

**Languages** Python, C, Dart, Racket, HTML, CSS  
**Frameworks** React, React Native, Tensorflow, Node.js

## Projects

### Covid Aggregator

REACT NATIVE, NODE.JS, MONGODB

June 2021

- An app to provide a user with information about available vaccines near them, people willing to donate useful resources
- Used React Native to create a frontend with multiple dynamic screens
- Created backend with Node.js and MongoDB, with a complete MVC structure
- Wrote modularized, clean code, tested backend with Jest

### MNIST gesture recognizer

PYTHON, TENSORFLOW

- Used Tensorflow to create a gesture recognizer trained on the MNIST dataset with accuracy of upto 98%
- Increased accuracy by using CNNs

### UWFlow Bot

PYTHON

EngHacks

June, 2021

- A reddit bot that replies to mentions of a UWaterloo course on the UW subreddit and replies with course information
- Created with Python, deployed using Repl.it

### HVAC Controller

VHDL

July 2021

- Designed combinational logical component for a home Energy Monitoring Controller
- Created simulations and came up with edge cases to test proper functioning of code
- Utilized VHDL concepts like Structural and Dataflow styles, learnt how to work with software - Quartus Prime

## Mini-Projects

### TodoTDD

JAVASCRIPT, TEST DRIVEN DEVELOPMENT

August 2021

- Used a Test Driven approach to develop a REST API for a TODO app, created Integration tests

### SpotBot

PYTHON, FLASK

July 2021

- Utilized OAuth2 with Flask to get a users playlist and display it on the discord chat when a particular command is entered.

### Nice Chat App

REACT.JS, FIREBASE

July 2021

- Real time chat app, Firebase for Google authorisation, realtime database and backend, React.js for the frontend.

## Extracurriculars and Awards

### Presidents Scholarship of Distinction

University of Waterloo

AWARDED UPON ADMISSION INTO UNIVERSITY

2020

### Scholar Badge

Delhi Public School

AWARDED FOR EXCELLENT ACADEMIC PERFORMANCE

2018, 2020