# Ashish **Mahto**

SOFTWARE DEVELOPER · AMATEUR HACKER

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## **Sum**mary of Qualifications

- Languages - Scala, Python, Haskell, OCaml, Scheme, PSQL, R + RStudio, Javascript, C++, Java. Functional programming.
- Communication - Great communication skills, Honed teaching ability, Comfortable with Public Speaking, Careful Listener.
- Critical Thinking - A Problem Solver at heart, Enjoys analyzing and inventing creative approaches.

## **Exp**erience

### **Full Stack Scala Web Developer - Online Academic Tools**                    *Jan 2020 - August 2020*
*Jan 2019 - August 2019*

OAT.UWATERLOO.CA

- Developed and maintained an online admin portal used by academic advisors across campus, using Scala and the Play framework.
- Implemented a Forms subsystem to manage the complicated workflows of submitting and approving forms from students through different university advisors, during a pandemic.
- Responsible for testing and evaluating the pros and cons of multiple proposed site-wide architectural changes to the codebase.
- Learned how to work with Javascript, PostgreSQL, Java, R, HTML, CSS, and various standard libraries while on the job.

### **Instructional Support Assistant for CS 145**                    *Sep 2017 - Dec 2017*

TEACHING ASSISTANT

- Worked with backend of the Marmoset testing and submission service, to set up automatic testing for students' assignments.
- Organized and delivered course tutorials to students, including accessible introductions to theoretical computer science concepts.
- Dedicated a huge amount of time outside work into office hours for students, as well as around-the-clock online help.
- Continued to teach and guide employees that now hold this position, even years after my employment.

## **Pro**jects

### **Capture the Flag Competition Team - Unwanted MSware**                    *February 2021*

FOUNDER, TEAM LEAD  -  CTFTIME.ORG

- Founded a top 5% CTF team of students that are completely new to cybersecurity, yet perform above our expected level.
- Organized and led members for upcoming competitions, to maximize concurrent challenge solving, and to create an archive and learning environment for new members.

### **FIRST Robotics Competition - Volunteer**                    *April 2018*

CONTROL SYSTEMS ADVISOR

- Returned to FRC - Able to quickly pick up skills required to debug and assist teams with electrical subsystems and robot programming.
- Interacted professionally and courteously with members and mentors of many teams, to collaboratively fix Control System issues.

## **Edu**cation

### **University of Waterloo, 4B Term**                    *Sept 2016 - PRESENT*

CANDIDATE FOR BMATH IN COMBINATORICS AND OPTIMIZATION

- Taken / audited 2 year's worth of CS courses, including "Data Structures", "Object-Oriented Software Development", and a graduate level course "Software Foundations". Followed along assignments for MIT 6.822, "Formal Reasoning About Programs"