

# JESSICA CAO

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## EDUCATION

### UNIVERSITY OF WATERLOO | BACHELOR OF COMPUTER SCIENCE

Expected Graduation April 2023 | Waterloo, ON, Canada

Relevant Courses: Object-Oriented Software Development (C++), Data Structures and Data Management, Compilers (C++), Applied Probability/Stochastic Processes, Computational Statistics and Data Analysis

## SKILLS

### LANGUAGES

C/C++ • PHP • Java • JavaScript • Python • SQL • R • Bash • ASM (ARM, MIPS) • HTML5/CSS3

### FRAMEWORKS AND TOOLS

Laravel • MySQL • Redis • AWS • MongoDB • Bootstrap • jQuery • React.js • Docker • Linux • Git • Maven

## EXPERIENCE

### SOFTWARE ENGINEERING INTERN | MANULIFE FINANCIAL

January 2021 - April 2021 (Incoming) | Remote

### FULL-STACK DEVELOPER | CONDOS.CA

January 2020 - April 2020 | Toronto, ON

- Built full-stack Gmail-compatible customer relationship management tool using jQuery and asynchronous JavaScript, enabling convenient customer interaction tracking and reducing the time taken to spot high-potential clients for 150+ agents
- Implemented authenticated API requests service with Laravel and Redis, which **presents actionable key API data to company stakeholders and detects scraping behaviour** to protect company websites from harmful bot activity
- Developed and improved web modules and RESTful APIs using Laravel (PHP), MySQL, and MongoDB in a Docker environment to **shorten services runtimes by up to 85%** and introduce internal- and client-facing features
- Redesigned database schema to improve large volume data query performance, **reducing query response time by 40%** and resulting in faster website response times for over 5 million views per month

### JUNIOR QUALITY ASSURANCE ANALYST | NEWTOPIA INC.

May 2019 - August 2019 | Toronto, ON

- Developed automated test scripts in Java which covered 95% of sanity test cases and 35% of regression test cases for the company's React Native mobile app to ensure scalability and maintainability
- Configured the security permissions of Salesforce objects to **facilitate security testing and continuous delivery**
- Refactored the company's existing mobile and web automation projects to build with Maven and to **achieve continuous integration** with Bitbucket and CircleCI

### WEB DEVELOPER | WATFLY

September 2018 - January 2019 | University of Waterloo, ON

- Tracked website traffic and visitor interactions with Google Analytics to devise strategies for new member recruitment

## PROJECTS

### MOOD DETECTION | PYTHON, TENSORFLOW, OPENCV, FLASK

- Architected a web app with Flask that determines the user's mood through a device camera
- Identified faces in any image using OpenCV's Haar Feature-based Cascade Classifiers and processed them for a machine learning model that classifies emotions
- Working on connecting the front end service, the facial identification script, and the ML algorithm into a coherent web app

### COPTIMISM | PYTHON, PYGAME, TKINTER

- Built a chess engine that supports up to two players with a simple AI implemented using the minimax algorithm
- Implemented GUI icons for check, checkmate, mode selection, and backtracking a move using Python's tkinter package