

Saarang Agarwal

2A Computer Engineering | University of Waterloo

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Skills

Backend	Java, C++, JavaScript, Python, JSON	Frontend	HTML5, CSS3, TypeScript, Bootstrap
Frameworks	Spring Boot, Node.js, Express.js, React, Angular	Tools	Git, REST API, Docker, Kubernetes, JUnit
Databases	SQL, PostgreSQL, MongoDB, AWS	Other skills	Agile (Scrum), Adaptability, Leadership
Summary: 3+ years of programming experience Inquisitive & Motivated team player Great multitasking & problem-solving ability			

Experience

SS&C Technologies

May 2020 — August 2020

Full Stack RnD Developer

Toronto, Canada

- **Created** and **deployed** a Configuration Management System from scratch to **replace the company's standard JSON server** using Java, Spring Boot, JSON (schema), PostgreSQL, Docker, Kubernetes, Helm Charts and Jenkins
- Increased **scalability by 48%**, **efficiency by 36%**, **flexibility by 66%** by creating & deploying the aforementioned system
- **Automated** POSTing of data by creating a python script to populate the database by providing a GitLab URL
- Created multiple **JUnit tests** and identified 2 vulnerable edge cases, thereby delivering an efficient product
- Conducted various WebEx/ Zoom meetings with different stakeholders to present solutions and discuss potential ideas

Moralyzer (www.moralyzer.com)

July 2020 — August 2020

Full Stack Developer

Waterloo, Canada

- Styled over 10 different types of cards/ forms using **React.js** to directly enhance the experience of **500+ daily visitors**, with the aim of creating a social media platform to organize and curate content to fight social injustices worldwide
- Developed the backend of user profiles and donation forms using Ruby on Rails and PostgreSQL

TOHacks (Executive team)

July 2020 — Present

Full Stack Developer

Waterloo, Canada

- Created a **Discord Bot** from scratch using **Node.js & PostgreSQL** to develop a real-time help queue and mentor management application for hackers and mentors to request/ claim tickets
- Developed an applicant dashboard frontend using **React.js**, helping applicants submit & track TOHacks applications
- Marketing analysis & 50+ user interviews predict the discord bot to directly assist 500+ hackers during each hackathon

Projects

Wat-Friends (wat-friends.herokuapp.com)

August 2020 - Present

NodeJS, ExpressJS, Passport, Python, Google Cloud, MongoDB, HTML, CSS, EJS, Bootstrap

- Created and launched a full stack website to help students find friends (platonic, romantic, project buddy) based on their preferences using a 2012 noble prize-winning matching algorithm and a list of user profiles
- Coded **10+ full stack** features including matching algorithm, account management, e-mail confirmation, password reset
- Developed **reusable code** using DRY (Don't repeat yourself) method to automatically render data based on its type.
- **Led & managed** a team of 8 people (developers, marketing, designers, business) & made important project decisions
- Marketing analysis, 50+ user interviews and initial reactions predict an expected user base of **2000+ users**

Chef Fridge (github.com/Saarangagarwal/ChefFridge)

January 2020

C++, OpenCV, Arduino, Google Cloud Vision, MongoDB, Google Cloud

- Created a **smart fridge** prototype that suggests recipes to users based on the contents detected in their fridge
- Used Arduino Uno, C++, MongoDB & OpenCV to take & save a picture of the fridge contents when the door is closed
- Used Google Cloud Vision to detect the contents of the fridge and an API to get potential recipes

Bank Simulator (github.com/Saarangagarwal/BankSimulator)

September 2019

Java, SQL, JDBC

- Created an application using Java which supports user accounts, money deposit & withdraw & administrator's space
- Used image.io and swing libraries to simulate a bank environment and used threads to induce sequential delays
- Used MySQL to store transactions, credentials, user activities & identified referential integrity constraints in the database

Education

University of Waterloo | Bachelor of Applied Science, Computer Engineering

September 2019 – May 2024

- **Dean's honours list recipient** for 2 consecutive terms (1A- **91%**, 1B- **94%**) | Aggregate rank: **10 out of 230**
- Relevant Courses: Fundamentals of programming (92%), Algorithms & Data Structures (ongoing), Math & Logic (95%)