

Zihan Chen

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EDUCATION

Master of Computer Science, University of Ottawa (GPA 3.84/4.0) 2021 - 2023

Honours BSc in Computer Science, University of Ottawa (GPA 3.88/4.0) 2016 - 2021

Honors & Rewards: Dean's List, Merit Scholarships (2016 - 2021), Summa cum laude honors

WORK EXPERIENCE

Software Developer Intern May 2020 - Aug 2020
Ford Motor Company Ottawa, ON

- Wrote test cases in **C++** using Google testing framework (**Google Test** / **Google Mock**) that utilizes mocked testing objects to comprehensively cover multiple test scenarios which increased test coverage to 80%.
- Facilitated the transition to better service by updating legacy API calls in the business logic.

Software Developer Intern Sept 2019 - Dec 2019
IBM Canada Ottawa, ON

- Implemented an automated **Java** pipeline to facilitate the uploading and retrieval of smarts modules from Cognos web app, and **Python** scripts were incorporated to clean and extract features from datasets and smart modules.
- Improved problem-solving skill and the ability to spot defect roots via intensive defect fixings in an agile team-working environment.

Software Developer Intern Jan 2019 - Apr 2019
Mitel Networks Ottawa, ON

- Assisted in developing a **Java** chat micro-service which is responsible for handling conversation APIs.
- Designed and built a **JavaFX** chat application (similar to Slack) which utilizes REST APIs from chat micro service as an API demo to Java dev team.

PROJECT EXPERIENCE

Help! forum 2023

- Architected a full stack social network application in **MERN stack (MongoDB, Express.js, React.js, Node.js)**, which empowers users to create personal profiles, make posts, engage with likes and comments, and follow other users.
- Applied Redux toolkit to manage application state and integrated JWT token-based authentication for REST APIs.

Food Ordering System 2023

- Created a **Java Spring Boot** based system enabling restaurant owners to customize the menu, manage employees, and control their system access. Regular users can effortlessly navigate the system, explore the available food items on the menu, and conveniently place orders.
- Utilized **Spring Data JPA** and **Hibernate ORM** by performing CRUD operations on domain specific entities. Streamlined the data retrieval process by leveraging **Redis** for enhanced efficiency.

Management System 2023

- Developed a **Java Spring Boot** based backend system that handles CRUD operations to manage different entities, interacts with **PostgreSQL** database via JPA, and integrates Apache Shiro for user authentication.
- Utilized **React.js** to build an interactive user interface.

Twitter Viewer 2022

- Engineered a **React-Express.js** tweet reader web app in **Javascript** that allows users to login via their Twitter credentials(3-legged OAuth), search for and follow other users, track their newest tweets, and like the tweets.
- Integrated **Redux** state management toolkit, and **PostgreSQL** to store user-related information (Followings, likes, etc) of registered users, and the Semantic UI for user interface design to provide a responsive experience.

- Conducted experiments on text classifications tasks, and investigated fairness and classification performance metrics using **Python**.
- Compared effectiveness of SAFER and random masking approaches on fairness enhancements of several language models.

- Designed and developed a discord chat bot that can automatically reply to messages where the bot is mentioned as well as generate and send responses based on the input sentence from other users asynchronously in **Python**.
- The backbone of the bot is a GPT language model from Microsoft, trained on discord conversation dataset, which is preprocessed with regex, and **PyTorch** is used in training.

TECHNICAL SKILLS

Languages:	Javascript, Java, Python, Kotlin, C++
Technologies/Others:	React.js, Node.js, Express.js, Spring Boot, Redis, PostgreSQL, MongoDB, Linux, Docker, Git, HTML, CSS, Nginx, AWS
Test Tools:	Selenium, JUnit, Postman