

# Rui Zhu

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## EDUCATION

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### Carleton University

B. Computer Science, 10.65/12 CGPA

Sept 2016 – Dec 2020

Ottawa, ON

## WORK EXPERIENCE

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### Software Engineer

Capital One

May 2019 – Aug 2019

Toronto, ON

- Upgraded RESTful API from Spring 4 to Spring Boot 2, improving code maintainability and currency
- Added performance increasing modifications such as object pooling for encryption/decryption classes
- Implemented new endpoints in API backend to improve usability
- Implemented 100% code coverage through SonarLint
- Created unit tests and integration tests using Wiremock, embedded H2 DB, and Mockito
- Maintained existing tools such as ATDD environment with Cucumber, and resiliency with Hystrix
- Met sprint goals and gave quantitative updates during scrum meetings

### Front End Developer

Ross Video

Sept 2018 – Dec 2018

Ottawa, ON

- Used JS and third party libraries like JQuery to implement new features for customers such as a video player
- Wrote Java upgrade scripts for version changes within the product that would update the database
- Improved UX on touchscreen devices by fixing library compatibilities with touch.js

### Software Test Engineer

Gemalto

May 2018 – Aug 2018

Ottawa, ON

- Wrote performance testing scripts using python and java to automate retrieval of data into various formats (xml, csv)
- Wrote queries using SQLAlchemy to communicate with PostgreSQL database
- Created a web app using JQuery to run and display comparisons between data sets, improving website usability
- Computed statistics from data sets, which were then sent to the front end through a Flask route

### Teaching Assistant

Carleton University

Sept 2017 – Dec 2019

Ottawa, ON

- Helped students understand bugs with their code by running through their code with them
- Explained to students various design patterns and data structures/algorithms in Java/Python

## PROJECTS

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### Matrix Calculator

React, Redux, TypeScript

- React SPA that performs matrix operations such as RREF, Transpose, Multiply
- Uses math.js for experimental symbolic algebra support

### T3D

Java

- Pseudo-3D tower defence game using raycasting to render walls and entities
- Simple pathfinding with A\*

## SKILLS

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<b>Programming Languages</b>	Java, JavaScript, Python, TypeScript, Bash, SQL
<b>Technologies &amp; Frameworks</b>	Spring Boot, React, Redux, Spring, Wiremock, Cucumber, Mockito, JQuery, JUnit
<b>Tools</b>	Git, Docker, SVN, nix