

Riley Gavigan

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EDUCATION

Western University

BSc - Honours Specialization in Computer Science

GPA: 3.90/4.00 (Cumulative Average: 90%)

Awards: Bennie and Shirley Bradshaw Award in Science, Western Scholars, Western Scholarship of Distinction

Relevant Coursework: Analysis of Algorithms, Artificial Intelligence, Calculus, Computer Architecture / Organization, Discrete Math, Linear Algebra, Machine Learning, Operating Systems, Probability, Statistics, Unstructured Data

September 2020 – April 2024

London, Ontario, Canada

EXPERIENCE

Western University

Undergraduate Thesis Researcher, Bioinformatics Lab

- Proposed research aiming to explain the factors contributing to the superior performance of specific transformer models in generating contextual embeddings for protein alignment scoring
- Gaining insight into the variation in cosine similarity results between different embeddings (i.e. ProtTrans)

September 2023 - Present

London, Ontario, Canada

Amazon

Software Engineer Intern

- Designed and developed a robust full-stack application using **React**, **TypeScript**, and **Java** that streamlined auditing processes and significantly reduced on-call software engineer efforts for a critical production service
- Revamped service capabilities by introducing a set of new APIs with fine-grained authorization, resulting in highly secure and crucial functionality used daily by several teams at Amazon
- Implemented features such as permalinks; sorting, pagination, and filtering; **Amazon SNS**; and caching results
- Leveraged **AWS CDK** to create and manage resources such as **Lambda**, **API Gateway**, and **Route53**; providing automatic, scalable deployment into several regions
- Implemented comprehensive front/back-end integration testing using **Jest**, **Nightwatch.js**, **React Testing Library**, **Mockito**, and **TestNG** to ensure CI/CD compliance, significantly reducing deployment errors
- Provided influential code review feedback and supported the successful implementation of caching in a critical service, resulting in a **90%** performance improvement during load testing

May 2023 – July 2023

Toronto, Ontario, Canada

Ramsey Lake Partners

Private Equity Analyst

- Performed comprehensive analysis of financial statements, revenue sources, and relevant data to evaluate potential SaaS investments; generating over **200** high-quality investment opportunities for the firm
- Developed and implemented **Excel VBA** macros and scripts to automate the collection and analysis of financial data, resulting in a significant reduction in processing time of **80%**
- Built and maintained a strong finance industry network, generating **75** new contacts for the firm weekly

October 2021 – April 2022

Toronto, Ontario, Canada

PROJECTS

Map Navigation Application | Java

February 2023 - April 2023

- Developed a user-friendly application for viewing campus maps that enabled users to favorite points of interest, resulting in a reduction of time spent navigating the university campus by **85%**
- Conducted rigorous testing and debugging, ensuring the application is stable, efficient, and user-friendly

E-Commerce Website | React, Node.js, Redux, MongoDB

August 2022

- Developed an aesthetically pleasing and fully functional e-commerce clone website using **React** and **Node.js**, enabling users to view Pinterest pins with an intuitive user interface and seamless browsing experience
- Implemented a robust and scalable **MongoDB** database system, enabling the application to seamlessly handle large data volumes and high traffic while maintaining optimal performance and stability

TECHNICAL SKILLS

Backend: Java, C, C++, Python, Node.js, Express.js, Spring, Swing, Google Guice, Dagger, R, Scheme

Frontend: TypeScript, JavaScript, React, HTML/CSS, Bootstrap

Testing: Jest, React Testing Library, Nightwatch.js, Cucumber, JUnit, TestNG, Mockito

Tools: AWS, Git, MongoDB, SQLite, Docker, Unix/Linux