

RILEY MORRIS

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EDUCATION

Bachelor of Applied Science, University of Toronto

June 2022

Electrical & Computer Engineering, with Minor in Business, Leadership & Communications Certificates

SELECTED TECHNICAL SKILLS

Languages: C, C++, Java, Python, Javascript, HTML, Swift, SQL, ReactJs, TypeScript, NodeJs

Cloud Architecture: MongoDB, ElasticSearch, SEO

PROFESSIONAL EXPERIENCE

Software Engineer, Sanofi

October 2022 - Present

- Using ReactJs to help develop front-end features that increased user experience for over 10,000 employees
- Optimized SEO by adding a dismax query in ElasticSearch that increased the recall in the search without loss of relevancy
- Streamlined pipeline by cutting down on inefficiencies in data processing by 15%

Software Developer, Nference

January-April 2022

- Developed a mixture of backend and frontend features to build a user interface that discovered medications in various research papers for biomedical applications
- Implemented algorithms and data structures to build an autocomplete feature using Python
- Designed and built the layout and user experience using React

Market Analyst, TMX Group - Equity and Derivatives Trading Products

May-August 2021

- Provided quantitative and strategic support in product design to foster the growth of TMX products
- Developed data-based insights to optimize client interactions with Equity Trading products
- Assessed new opportunities for TMX to leverage equities trading and enterprise capabilities

Research Analyst, Virtu Financial

May 2019-May 2020

- Analyzed trading data for 90 institutional clients to identify trends and patterns in trade execution performance as part of the Global Transaction Cost Analysis team
- Developed analytics reports and presentations to illustrate client-specific algorithmic performance
- Automated and streamlined reporting; optimized production time for the Analytics Teams' workflow by 50%
- Assisted in acquiring over 20 new clients through sales and marketing events

SOFTWARE ENGINEERING PROJECTS

Recipe Web Application

- Created a web application for recipe searches and management in ReactJS
- Utilized MongoDB to update and manage web application with over 100 custom recipes

Relationship Management Library

- Designed and built a javascript library in vanillaJS for identifying and viewing the relationship between two nodes using unique data structures to represent the different connections
- Used Canvas API to visualize the graph structure on the DOM
- Created a step-in feature to allow users to click on the mouse cursor to traverse through the graph

Database Design: FIFA World Cup Database (Language)

- Designed and developed a FIFA World Cup database to identify trends for winning the World Cup tournament

Web-Based Navigation UI and Algorithm (C++)

- Led the research, design and development of an online navigation tool, designed user interface for usability and responsiveness, and developed numerous performance-driven algorithms (A* and Dijkstra) to optimize travel time