Riley Morris

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Technical Skills

Languages: C,C#, C++, Java, Python, Javascript, HTML, Swift, Tailwind, SQL, ReactJs, TypeScript, Terraform
Frameworks: MongoDB, ElasticSearch, NodeJs, NextJs, AWS CP, AWS Developing Serverless Solutions

Professional Experience

Software Engineer, Sanofi **Oct 2022 - Present**

- Designed and built a GenAi application to generate Clinical Study Reports (CSR) enabling medical writers to expedite drug-to-market timelines by 90%, built with React and NodeJs
- Developed reusable, responsive and accessible components and front-end library (Elements), built with React
- Led a significant refactor to modernize front-end codebases by integrating an in-house front-end library, Elements, reducing development time by 20% and improving maintainability and user experience
- Developed full stack feature developments that enables data scientists and machine learning engineers to smoothly develop and deploy AI models and applications at scale, with React, Python and FastApi
- Developed an internal search application, enabling 10,000+ employees the ability to find structured data (database tables, Excel files etc.) and unstructured data (PDFs, images etc.) significantly improving efficiency and reducing time spent on data retrieval
- Collaborated with product managers, engineers, and stakeholders to optimize the search engine by implementing a DisMax query in ElasticSearch, enhancing recall by 15% without relevancy loss, while designing a scalable solution to handle high traffic and large datasets

Software Engineer, Nference **Jan 2022 - Apr 2022**

- Designed and implemented a robust user interface that enables the discovery of medications in biomedical research papers by integrating natural language processing (NLP) algorithms with an intuitive frontend
- Developed a trie-based data structure to efficiently store and retrieve user input, enabling sub-millisecond query responses for datasets with over 1 million entries
- Developed responsive layouts and engaging user experiences using ReactJs

Market Analyst, TMX Group - Equity and Derivatives Trading Products **May 2021 - Aug 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

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

Education

Bachelor of Applied Science, University of Toronto **June 2022**
Electrical & Computer Engineering, Minor in Business, Leadership & Communications Certificates

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

Web-Based Navigation UI and Algorithm

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