Arjunvir Sidhu

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Work Experience

Junior Technical Analyst (Co-op) Sept 2023 - Dec 2023
Ontario Ministry of Transportation (MTO) *Toronto, ON*

- Developed a Chat Application in Python for business analysis, featuring automated data retrieval (CSVs) and visualizations, targeting a **150% increase in user base**
- Implemented Azure OpenAI's API for NLP to automate the conversion of text to SQL queries & text to visualization code, connected to PostgreSQL server to fetch data
- Presented the application to shareholders and management, securing API key & budget for the team
- Engineered AI system prompts & **optimized API costs** by allowing user to enable/disable chat history
- Created knowledge transfer documents and project recommendations to facilitate a smooth transition for the team and push the project to production
- Led Hackathon team to 2nd place, conceptualizing and designing a transportation app catered for Ontarians

Screener & Data Entry May 2020 - April 2023
Schlegel Villages *Mississauga, ON*

- Implemented an automated data entry program, resulting in ≈ **85% reduction in downtime** previously dedicated to manual data entry
- Interacted with a database on a daily basis to keep client's screening and testing information/visitation history

Education

Bachelor of Computing Honours, Computer Science (Co-op) Sept. 2021 – Apr. 2026
University of Guelph *Guelph, ON*

- Awarded $3000 entrance scholarship & Member of Google Developer Student Club
- Relevant Courses: Discrete Structures, Linear Algebra, Object-Oriented Programming, Data Structures, Software Systems Development and Integration, Operating Systems, Analysis and Design of Computer Algorithms

Data Analytics Professional Certificate Jul. 2023 – Dec. 2023
Google *Coursera*

- Demonstrated hands-on experience with data cleaning, data visualization, project management, interpreting and communicating analytical findings

Projects

Option Pricer | Python, NumPy, SciPy, Streamlit (2023) github.com/rjnvr/option-pricer

- Implemented the Black-Scholes model to accurately determine option prices using NumPy and SciPy (norm)
- Incorporated key variables such as underlying asset price, strike price, time to expiration, volatility, and risk-free interest rate, resulting in highly accurate and reliable pricing predictions

Molecule Visualizer Database | Python, C, SQLite, JavaScript, jQuery, AJAX, HTML/CSS (2023)

- Created a full-stack app that lets users upload .cif files, parsing them into SVG format for display. Integrated SQL database for storing and retrieving molecule data
- Leveraged Python web server hosting, coupled with jQuery and AJAX, to ensure smooth functionality and interactive components within the application

Portfolio Website | JavaScript, React.js, HTML/CSS (2023) github.com/rjnvr/portfolio-website

- Developed a responsive portfolio website, implemented EmailJS API to build an interactive contact form on the web page for convenient contacting
- Leveraged React Hooks and event listeners to create dynamic user experiences, ensuring reliable performance by hosting the website on Hostinger

Tic-Tac-Toe Switch | Java, Java Swing, JUnit (2022)

- Created a GUI which allows the user to play classic tic-tac-toe or numerical tic-tac-toe, allowing the user to import and export games
- Improved code quality by implementing inheritance/interfaces, unit testing and Javadocs

Technical Skills

Languages: Python, C/C++, JavaScript, Java, SQL
Frameworks and Libraries: React.js, Streamlit, Pandas, NumPy, Java Swing, JUnit, Axios
Tools: Git, APIs, Linux/UNIX, AWS, SQL Server Management Studio, Azure DevOps