

Jai Vadera

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Technical Skills

Languages: C/C++ , Python , JavaScript , SQL (Postgre) , HTML , CSS

Frameworks: React , Node.js , Express.js , REST API

Concepts: Object-Oriented Programming , Data Structures , Algorithms , ETL Processes

Libraries: Pandas, NumPy, Scikit-learn, jQuery

Experience

Business Systems Analyst

Sep. 2023 – Dec. 2023

Hamblin Watsa Investment Council (A Fairfax Company)

Toronto, ON

- Developed a **data clustering algorithm** to optimize Compliance Data Management using python
- Built a data pipeline using an extract, transform and load (**ETL**) process to transfer data from XML files into an SQL database
- Assisted in the review and documentation of **API functionalities** used for compliance testing procedures
- Executed ORE (Open Source Risk Engine) simulations to derive various sensitivities for trades.
- Gained experience across all aspects of investment operations (front, middle and back-office)

Projects

IntroToStats Calculator | *JavaScript, jQuery, HTML, CSS*

Sep.2024 – Oct. 2024

GitHub Repository

- Developed a web-based calculator that simplifies complex statistical operations seen in a statistics course
- Reduced calculation time by **50%** compared to traditional scientific calculators
- Enhanced UX by creating an intuitive interface that decreased user input time by half
- Implemented key mathematical functions using JavaScript, with an error rate of less than **1%**

Diabetes Prediction Model | *Python, Pandas, Scikit-Learn*

Aug. 2024 – Sep. 2024

GitHub Repository

- Developed a machine learning model using Python to predict diabetes based on medical data
- Employed Scikit-learn to implement algorithms such as Support Vector Machines
- Conducted data preprocessing and feature scaling using Pandas and NumPy

Cellphone sales data analysis | *SQL*

Sep. 2022 – Oct. 2022

GitHub Repository

- Performed data analysis on the sales of cellphones in the USA using SQL on Azure Data Studio
- Created a database schema in order to fit the representation of the data
- Used SQL techniques such as joins, append, aggregate functions, and filtering to write SQL queries to retrieve information such as state and year wise sales, top selling phone models, top selling manufacturer and year by year sales

Education

University of Waterloo

Waterloo, ON

Bachelor of Mathematics in Statistics, minor in Combinatorics and Optimization

Jan. 2023 – Sep. 2027

Awards

- CBSE Certificate of Merit, 2020 (Awarded to the top 0.1% students in the board)
- 1st rank in school for International Mathematics Olympiad, 2021
- University of Waterloo President's Scholarship of Distinction