

SANAT BHALLA

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EXPERIENCE

Embedded Software Developer

Ford Motor Company

- Working on developing the UX framework on the SYNC Bench of Ford Mustang using React and JavaScript
- Developing a middleware using C/C++ to increase the efficiency of the applications
- Making API calls in C/C++ to the native JavaScript backend to optimize the reaction time

Co-Founder & ML Researcher

Crypto.io

- Developing an automated trading software for Crypto currencies based on historical data and sentiment analysis of the market trends
- Designing a Neural Network using NLP and Image Recognition in a Semi-Supervised form to train the model with data accessed from various sources such as Twitter, Yahoo News etc
- Designing a decision tree for the model to calculate the expected impact of each data centric and sentiment based decision to improve the accuracy of the model

Data Engineer

InnovaPost

- Worked on a continuous ongoing project to shift all the Canada Post data from Legacy Oracle Servers to the Cloud Databases in an Agile and Scrum format
- Developed Initial and Delta Load ELT Pipelines using Python that performed various transformations to move data from Oracle to Azure SQL Server
- Used Azure Data Factory as an Orchestrator to accommodate the pipeline and made Spark API calls to trigger Databrick notebooks
- Developed and Documented unit tests to check the working of different parts of the Data Pipeline at the functional level

PROJECTS

Movie Recommender | Python

- Developed a Machine Learning Movie Recommendation System using Python based on the concept of User-User Collaborative Filtering
- Used Python Libraries such as Numpy and Pandas to work with DataFrames, arrays and wrote various algorithms to clean, standardize and structure the final solution

Hydra Card Game | C/C++

(Private Repository, message to see)

- Developed the backend of a computerized card game using Object-Oriented Programming and advanced C/C++ concepts such as smart pointers, inheritance, polymorphism
- Managed memory on the heap using smart pointers thus making the program more efficient
- Implemented a user friendly MVC (Model View Controller) design pattern that promoted high cohesion, low coupling and the concept of encapsulation and information hiding

Stock Movement Visualizer | JavaScript

- Developed an app to visualize changes in stock prices
- Designed front-end of the web app using HTML-CSS, added functionality with JavaScript and hosted using Heroku
- Monitored the backend during the runtime using NodeJs/Nodemon

Waterloo, ON (Remote)

Dec 2021 - Present

Waterloo, ON

Aug 2021 - Present

Ottawa, ON (Remote)

May - Aug 2021

February 2021

August 2021

December 2020

EDUCATION

University of Waterloo

Waterloo, Canada

2020 - 25 (expected)

Candidate for Bachelor of Computer Science

Member of UW Data Science Club

DPS Kalinga

Cuttack, India

2006 - 20

AISSE (class 10) - 92.4%

AISSCE (class 12) - 96.6%

SKILLS

Languages

Python, C/C++, JavaScript, SQL, R, HTML/CSS, DrRacket

Data Science / Engineering

Scikit-learn, MySQL, Apache Spark, Databricks, MongoDB

Software/Web Development

React.js, TypeScript, Angular, Bootstrap, NodeJs/Nodemon,

Others

Git, GitHub, Cloud Services (Azure, AWS, GCP)

ACTIVITIES

Data Science Club (2020 - 21)

- Developed a Data Visualization Project on NBA Statistics using Jupyter Notebooks for the UW Data Science club that helped me understand the basics of Machine Learning models
- Used Python Libraries such as Numpy and Pandas to explore and clean the data
- Used Plotly to visualize and present the data to draw conclusions

School Head Boy (2018 - 20)

- Headed the students' council (2018-20) and organized various activities as well as planned large events for the school
- Nominated by the school for Indo-Russian meet held at New Delhi, India