DEWANG MARYA

Hoffman Estates, IL (US Lawful Permanent Resident)
647-867-3486 | maryadewang@gmail.com | github.com/DewangMarya | linkedin.com/in/dewangmarya

EDUCATION

Bachelor of Science - Computing Science (Minor in Economics) *DEC 2024*
University of the Fraser Valley, Abbotsford
Dean's list - Winter 2021, Winter 2023, Fall 2023, Fall 2024 (GPA 3.90)

SKILLS

Languages: Python | C# | Java | SQL | R | Javascript | HTML | CSS
Tools: Jupyter Notebook | GitHub | Google Firebase | Google Maps API | Unity | Godot | Eclipse | MS Excel | MS SQL | MongoDB | Docker
Frameworks: Numpy | Pandas | PyTorch | Tensorflow | Keras | SciKit-Learn | Matplotlib | Seaborn | Plotly | MRTK | BeautifulSoup4

EXPERIENCE

Data Science - Research Assistant *OCT 2024 – DEC 2024*
University of the Fraser Valley *Abbotsford, Canada*

- Fine-tuned a ***BERT*** model to classify text from the years 1500-1649 into context based categories using EEBO dataset
- Extracted and parsed data from ***XML*** files using ***BeautifulSoup4*** to prepare structured datasets
- Generated interactive data visualizations to illustrate historical trends using ***Matplotlib, Plotly***

Undergraduate Research Assistant *MAY 2024 – AUG 2024*
University of the Fraser Valley *Abbotsford, Canada*

- Developed an interactive real-time browser-based graph visualization tool with configurable caching for exploring large datasets using ***JavaScript***, ***HTML***, and ***CSS***
- Contributed to comprehensive literature review and research regarding constrained outputs in Large Language Models

Machine Learning Intern *OCT 2023 – DEC 2023*
RBC Borealis - Let's Solve it Mentorship *Vancouver, Canada*

- Organized and led development of models to predict wildfires in Canada utilizing **ML models - *XGBoost, Random Forest, Multilayer Perceptron*** and performed hyper-parameter tuning
- Conducted data preprocessing, data visualization & model evaluation using ***Pandas, Numpy, Scikit-Learn, GeoPandas, Folium, Matplotlib & Seaborn***

Data Analysis - Research Assistant *SEP 2023 – DEC 2023*
University of the Fraser Valley *Abbotsford, Canada*

- Contributed to a research assessing the predictive accuracy of MLB team projection systems from 2008 - 2023.
- Conducted comprehensive **statistical analysis and modeling** in Python ***(NumPy, Pandas)***
- Developed statistical models and evaluated projection systems using statistical methods including **Mahalanobis distance, Bonferroni confidence intervals, Benjamini-Hochberg procedure, & multiple hypothesis testing**

PROJECTS

3D Robot Arm Game *Fall 2024*

- Collaborated with a team to develop a 3D game in ***Godot Engine*** using ***C#***, featuring a user controlled robotic arm with realistic physics-based interactions

- Integrated dynamic camera controls, environmental textures, and celebratory animations to enhance the user experience

Real time Issue Reporting App *Winter 2024*

- Spearheaded development of an Android App in ***Android Studio*** using ***Java*** that allows users to by log complaints and upload pictures, and vote on local issues to raise priority(e.g. potholes, graffiti)
- Implemented user authentication, real-time data storage using **Google Firebase** to manage user data and issue reporting securely and efficiently. Integrated **Google Maps API** for location based-issue tracking and directions

International Student Enrollment Prediction *Winter 2024*

- Investigated the viability of using ***ARIMA***, ***XGBoost*** and ***RandomForest*** models for predicting future enrollment
- Analyzed and visualized international student enrollment trends across post-secondary institutions in BC

Fake News Headline Detection *Fall 2023*

- Developed **NLP model** to detect fake news headlines, achieving an accuracy of 87% using ***Tensorflow & Keras***
- Researched and prepared dataset for training & evaluation. Employed 'Early Stopping' to prevent model overfitting

Crime Rates and Income Levels Data Analysis *Summer 2023*

- Identified crime patterns and ranked cities using **Linear Regression, Logistic Regression** and **K-means clustering**
- Assessed the data correlation between median income and crime rates across jurisdictions using ***R***

Mixed Reality Research Project *Summer 2023*

- Collaborated in a team to conduct extensive research in the field of AR technologies in order to implement Computer Vision and Machine Learning models to help increase independence of people with cognitive disabilities.
- Built Video Capture System and Live Feed System for HoloLens 2 using ***C#***, ***Mixed Reality Toolkit (MRTK)*** and ***Unity Game Engine***. Worked on the development of a user-centric interface for the HoloLens 2 app.

CERTIFICATIONS

- IBM - Docker Essentials: A Developer Introduction JAN 2025
- DeepLearning.AI - Preprocessing Unstructured Data for LLM Applications JUN 2024
- Nvidia DLI - Fundamentals of Deep Learning MAR 2024

EXTRACURRICULARS

- **Teaching Assistant** for Object-Oriented Programming, Intro to Programming, and Computer Hardware. Assisted with lectures, exams, and lab exercises (SEP 2023 to DEC 2024)
- **Computing Students Association Representative** - Fostered community engagement and collaboration among students. Managed the CSA lounge, by overseeing its operations, ensuring accessibility for students (OCT 2022 - DEC 2024)
- **Student Representative - Business and Computing Faculty Council** — Advocated for computing students' interests in program development discussions with the president, deans, professors, advisors and administrative members (SEP 2023 - AUG 2024)
- Presented a project on fake news headline detection at the **University of Kent Webinar**, showcasing an NLP model developed using TensorFlow and Keras — Link (DEC 2023)