Ahmed Elghamriny

elghamriny.com linkedin.com/in/ahmedelghamriny github.com/AhmedElghamriny

Technical Skills

Languages: Python, SQL, DAX, M, C++, Java, C, HTML, CSS, JS, C#

Frameworks and Tools: Power BI, Flask, NodeJS, ReactJS, Git, Firebase, Android Studio, TensorFlow, MySQL Workbench

Certifications: Machine Learning Specialization (DeepLearning.AI Stanford), Microsoft Power BI Data Analyst Professional, International Computer Driver's License (ICDL Arabia)

Education

Dalhousie University
September 2020 - May 2025

Bachelor of Computer Science
Halifax, Nova Scotia, Canada

Projects

Personal Portfolio (Elghamriny.com)

- Developed a responsive and interactive personal portfolio website to showcase skills and projects
- Built with React.js for a dynamic and modular user interface, enhancing user experience and engagement.
- Utilized Node.js for server-side functionalities, including handling form submissions and connecting to backend services.
- Utilized JavaScript, HTML, and CSS to design and structure an intuitive layout and visually appealing design.
- Implemented best practices in web development to ensure cross-browser compatibility and responsive design.

Movie Recommendation System

- Objective: Create a movie recommendation system that suggests movies to users based on their viewing history, preferences, or interactions.
- Key Features:
    - User-Based and Item-Based Collaborative Filtering: Recommends movies based on similar movie ratings and characteristics as well as similar users interests
    - Content-Based Filtering: Recommends movies based on the similarity between movie metadata (e.g., genre, director, cast, keywords).
    - Hybrid Model: Combines collaborative and content-based approaches to improve recommendation accuracy.
    - Exploratory Recommendations: Allows users to explore new genres and types of movies beyond their usual preferences.
    - Top N Recommendations: Generates a dynamic list of the top N movie recommendations for each user.

Capstone Project (Professional Certificate in Power BI)

- Applied scenario-based analysis and reporting techniques using Power BI to develop comprehensive dashboards.
- Created optimized data models, utilizing DAX (Data Analysis Expressions) for efficient querying and visualization of business metrics.
- Focused on data storytelling and actionable insights, presenting reports that enhanced decision-making capabilities for stakeholders.
- Developed a final project consolidating skills in data cleaning, transformation, visualization, and performance optimization.

Android Mobile Application (Academic Project – Dalhousie University)

- Collaborated with a team of students to design and develop a mobile application using Android Studio, Java, Firebase, and SQL to manage data storage, retrieval, and user authentication.
- Implemented Firebase for real-time database management and cloud storage, enabling seamless data syncing across user devices.
- Integrated SQL for efficient local data storage and management, enhancing app responsiveness and offline capabilities.
- Conducted testing and debugging sessions to ensure a smooth, user-friendly experience and maintained effective team communication for project milestones and issue resolution.

Email Spam Classification

- Objective: Developed a machine learning model to classify text messages as "Spam" or "Not Spam," aiming to improve the efficiency of message filtering systems.
- Tools & Technologies: Python, Pandas, NumPy, TensorFlow, Pickle
- Key Steps:
    - Data Preprocessing: Applied natural language processing techniques, including tokenization and stop-word removal to clean and prepare the dataset.
    - Model Development: Trained Naive Bayes classification model and fine-tuned parameters to maximize performance.
    - Evaluation: Assessed model accuracy, precision, recall, and F1-score, achieving an accuracy of 96.5% and F1-score of 96.2 on the test set.

Neural Network Implementation from Scratch (Personal)

- Designed and implemented a fully functional neural network using NumPy, including forward propagation, backpropagation, and weight updates for supervised learning tasks.
- Built and optimized matrix operations for efficient computation, leveraging matrix manipulation techniques to streamline performance.
- Developed a custom backpropagation algorithm to compute gradients and minimize the error function, enhancing the model's accuracy through iterative learning.

Volunteering Experience

Career Fair Volunteer Dalhousie University (Halifax, NS)

- Assisted in coordinating and managing university career fairs, guiding students and employers to designated booths and providing event support.
- Worked with the event team to ensure smooth registration and set up, enhancing attendee experience and ensuring efficient crowd flow.
- Provided students with informational materials and guidance, answering questions related to company booths and career opportunities.

Community Service Member *Al Mawakeb School (Dubai ,UAE)*

- Assisted young kindergarten and elementary students in locating their parents during events, ensuring a safe and organized environment for families.
- Supervised playgrounds and school grounds, providing guidance to children crossing roads and maintaining safety standards.
- Volunteered at annual sports day events, supporting children with event activities and coordinating with staff to manage schedules and transitions.