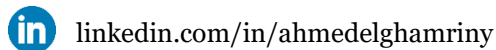


# Ahmed Elghamriny



## Technical Skills

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**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

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**Dalhousie University**

*Bachelor of Computer Science*

**September 2020 - May 2025**

*Halifax, Nova Scotia, Canada*

## Projects

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*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:
  - o User-Based and Item-Based Collaborative Filtering: Recommends movies based on similar movie ratings and characteristics as well as similar users interests
  - o Content-Based Filtering: Recommends movies based on the similarity between movie metadata (e.g., genre, director, cast, keywords).
  - o Hybrid Model: Combines collaborative and content-based approaches to improve recommendation accuracy.
  - o Exploratory Recommendations: Allows users to explore new genres and types of movies beyond their usual preferences.
  - o 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:
  - o Data Preprocessing: Applied natural language processing techniques, including tokenization and stop-word removal to clean and prepare the dataset.
  - o Model Development: Trained Naive Bayes classification model and fine-tuned parameters to maximize performance.
  - o 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**

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#### *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.