RAZAN ZBIB

AI & Machine Learning Enthusiast | Full-Stack Developer

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SUMMARY

Computer Science graduate passionate about Artificial Intelligence, NLP, and Full-Stack Development. AWS Cloud Foundations certified and Samsung Innovation Campus AI graduate with hands-on experience in Python, TensorFlow, and Keras. Strong background in supervised and unsupervised learning, neural networks (CNN, RNN, GAN), and text data processing. Skilled in developing responsive, data-driven applications and eager to apply AI techniques to real-world Arabic NLP challenges.

EDUCATION

Lebanese University – Faculty of Sciences   **2021 - July 2024**
B.S. in Computer Science

LICENSES & CERTIFICATIONS

Samsung Innovation Campus – Artificial Intelligence   *Samsung Innovation Campus - 2025*
- Foundational mathematics for AI (linear algebra, probability, statistics).
- Machine learning algorithms: supervised (SVM, Decision Trees, KNN) and unsupervised (clustering, dimensionality reduction).
- Deep learning with TensorFlow & Keras: CNNs, RNNs, GANs.
- Natural Language Processing (Text Mining, Text Preprocessing, Language Models, NLP with Keras).
- Capstone project applying ML techniques to real-world data.

AWS Academy Graduate - AWS Academy Cloud Foundations   *AWS - 2024*
Gained foundational knowledge of core AWS services (EC2, S3, IAM, RDS), cloud deployment models, scalability, security, and best practices in cloud computing.

PROJECTS

Twitter Sentiment Analysis:
- Developed a Twitter Sentiment Analysis solution using Logistic Regression trained on 1.6M tweets, achieving 79.87% training accuracy and 77.6% testing accuracy.
- Implemented a complete NLP data pipeline including text cleaning, Porter Stemming, and TF-IDF Vectorization for feature engineering.
- Containerized the model using Gradio and deployed the live application to Hugging Face Spaces for public access.

Sign Language Detection:
- Implemented a real-time sign language detection system using TensorFlow Object Detection API and transfer learning.
- Collected and labeled custom image datasets for multiple sign gestures
- Fine-tuned a pre-trained SSD MobileNet V2 model for gesture classification and optimized pipeline configuration for multi-class detection.
- Developed a real-time webcam detection system using OpenCV, capable of identifying sign gestures live.
- Covered end-to-end workflow: data collection, annotation, TFRecord creation, model training, checkpoint management, and live inference.

SKILLS

Artificial Intelligence & Machine Learning:
- Experienced in supervised and unsupervised learning algorithms (Regression, SVM, KNN, Decision Trees, Clustering, Dimensionality Reduction).
- Proficient in TensorFlow and Keras for building, training, and evaluating neural networks (CNNs, RNNs, GANs).
- Skilled in data preprocessing, feature engineering, and model optimization using NumPy, Pandas, and Scikit-learn.
- Solid understanding of mathematical foundations of AI including linear algebra, probability, and statistics.
- Experienced with text mining, tokenization, language modeling, and NLP with Keras for processing Arabic and English text data.
- Familiar with LLM fine-tuning concepts, retrieval-augmented generation (RAG), and prompt engineering principles.
- Hands-on project experience applying machine learning techniques to real-world open-source datasets.

Full Stack Web Development:
- Develop responsive and accessible web interfaces using HTML5, CSS3 (Flexbox, Grid, Bootstrap), and JavaScript (ES6+).
- Build full-stack applications using ReactJS for the frontend and PHP/MySQL for the backend.
- Integrate RESTful APIs using Axios and Fetch to enable seamless frontend-backend communication.
- Using version control with Git & GitHub.

UI/UX Design:
- Build interactive prototypes, wireframes, personas, and micro-interactions using Figma.
- Familiar with UX best practices, component systems, constraints, variants, and UI kits.
- Experience in testing, exporting assets, and preparing handoffs for developers/clients.

AWS & Cloud Services:
- Familiar with core AWS services including EC2, S3, IAM, and RDS. Understands basic cloud architecture, deployment models, scalability, and security best practices.

Programming Languages and Libraries:
- C, HTML, CSS, JavaScript, Java, Python, PHP, MySQL, ReactJS, NodeJS.

Tools:
- AWS, Git, VS Code, Figma, Visual Studio, Android Studio, VirtualBox, Jupyter Notebook, MS Office.