NADA SAFAN

Machine Learning Engineering

Email :nadasafan97@gmail.com
LinkedInProfile: www.linkedin.com/in/nada-safan-a6a919196
GitHubLink: https://github.com/nadasafan
Cairo - Egypt || 01092780899

SUMMARY

Innovative Machine Learning Engineer with a strong background in Artificial Intelligence, Large Language Models (LLMs), AI Agents, and Retrieval-Augmented Generation (RAG). Skilled in designing, training, and fine-tuning AI models for real-world applications. Passionate about integrating AI into software systems, optimizing ML pipelines, and leveraging Vector Databases for enhanced data retrieval. Experienced in working on cutting-edge AI research and development projects in healthcare, tourism, and renewable energy sectors.

WORK EXPERIENCE

- Machine learning engineering in Robo Mind company — **Feb 2024- till Now**
- Machine learning instructor in RTC — **Sep 2022 - till Now**
- Computer Science Teaching Assistant in Modern Academy For Engineering And Technology In Maadi — **2023- 2024**

EDUCATION

Master of Science in Computerscienece — **Sep 2023 - now**

- Faculty of information technology
- Specializationcomputer scienec and AI.

Bachelor of Computer Science "Excellent" — **2018-2021**

- Shibin Elkom (menoufia)university

Machine Learning Engineering — **2019-2020**

- Machine learning & Deep learning & data science – Epsilon Institute, Egypt

ADDITIONAL INFORMATION

- **Artificial Intelligence & Machine Learning**
  a. **LLMs & Generative AI: Training, fine-tuning, and optimizing large-scale AI models**
  b. AI Agents & Automation: Implementing LangChain, AutoGen for AI-powered workflows
  c. RAG Architectures: Designing intelligent retrieval-based AI applications
  d. Deep Learning & NLP: Transformers, CNNs, RNNs, and advanced NLP techniques

- **Software Engineering & Development**
  a. Languages: Python (Pandas, NumPy, SciPy), SQL
  b. Databases: PostgreSQL, Vector Databases (FAISS, Pinecone, ChromaDB)
  c. Cloud Platforms: Google Cloud, Azure, AWS
  d. Model Deployment & MLOps: MLflow, Kubeflow, Docker, FastAPI
  e. Version Control & Collaboration: Git, GitHub, Hugging Face, Kaggle, Colab

Languages :- English , Arabic.

Projects

- **Arabic Sentiment Analysis using NLP:** This project involves building a sentiment analysis model for Arabic text using Natural Language Processing (NLP) techniques. The goal is to classify Arabic text (e.g., tweets, reviews, comments) into different sentiment categories: positive, negative, and neutral. We employ various preprocessing steps to clean the Arabic text, followed by feature extraction, model training, and evaluation.
- **Face Mask Detection :** Build a CNN-based model to detect whether a person is wearing a mask or not using OpenCV and TensorFlow. Deploy it as a real-time detection system using a webcam.
- **Fake News Detection :** Train a Deep Learning model (LSTM, BERT) to classify news articles as real or fake. Use datasets from Kaggle and preprocess data using NLTK or spaCy.
- **Speech Emotion Recognition :** Use MFCC (Mel-frequency cepstral coefficients) features to train an RNN/LSTM model for emotion detection from speech.
- **Driver Drowsiness Detection :** Use OpenCV and Deep Learning to detect eye state (open/closed) and prevent accidents. Train a CNN model and integrate it into a real-time application.
- **Spam Email Classifier :** Use NLP techniques (TF-IDF, Word2Vec, BERT) to classify emails as spam or not spam.Train a Logistic Regression, Random Forest, or LSTM model on an email dataset.
- **Web application heart disease:** know people with heart disease based on their information using machine learning.

- Face recognizer of people who have data image to identify them later through the camera
- Web application Bike Sharing This app for predicting bike rented count on a specific hour.
- Web application Mask Detection People who wear a mask are recognized from data image.
- Web application Eyeglass Detection People who wear Eyeglass are recognized from data image
- A survey on Brain tumor Classification
- using computer vision
- Analysis of student performance in academic subjects
- CNN Model to classification image CIFAR 10 data
- Weather data analysis using visualization
- 50 startups analysis and using machine learning model To predict the best results

International Conferences:

Ibrahim Omara, ahmed Hagag, Nada Safan, and Ahmed S. S. “A Comparative Study of Pre-trained CNN Models for MR Brain Tumor Classification” under review for International Conference on Computers and Information.