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Cairo, Egypt

Summary

AI & Data Science Specialist | NLP & Generative AI Expert

An Artificial Intelligence student with over two years of hands-on experience in data analysis and developing advanced AI models. Specializing in Deep Learning, with strong expertise in Natural Language Processing (NLP) and its applications in text analysis, sentiment classification, and information extraction.

Proficient in working with Large Language Models (LLMs) such as GPT, BERT, and T5, leveraging Transformers for text analysis and language generation.

Skilled in Computer Vision, utilizing models like ResNet, EfficientNet, VGG16, and YOLOv5, as well as Generative AI techniques including GANs and Diffusion Models.

Highly proficient in Python and data analysis tools like Pandas and NumPy, with the ability to design and train advanced AI models capable of handling complex data and delivering highly accurate results. Passionate about developing innovative AI-driven solutions for data analysis and intelligent decision-making.

Education

Bachelor's Degree in Computer Science & Artificial intelligence Sep 2023 – Jul 2027 Arab open University

Work Experience

• Microsoft Student Club – Tech Member

• Contributed to technical discussions and workshops on emerging technologies. • Collaborated with peers on innovative projects utilizing Microsoft tools.
• Expanded knowledge in AI, cloud computing, and software development through hands-on activities.

- **Projects**
  - **Machine Learning Classification System**
    - **Developed a classification system using multiple ML algorithms.**
    - **Built an interactive GUI using Tkinter for better user experience.**
    - **Improved model accuracy through feature selection and data analysis.**
  - **Deep Learning Algorithms Analysis**
    - **Researched and implemented various deep learning algorithms.**
    - **Utilized TensorFlow and PyTorch for model development.**
    - **Analyzed the impact of architecture modifications and hyperparameter tuning.**
  - **Computer Vision & Image Processing Tool**
    - **Developed an image processing application with Edge Detection, Filtering, and Segmentation.**
    - **Designed a GUI using Qt5 to enhance usability.**
  - **Blood Cell Classification using Computer Vision**
    - **Built a Deep Learning model for blood cell classification using ResNet, EfficientNet, and VGG16.**
    - **Applied image preprocessing and augmentation techniques to enhance model performance.**
    - **Integrated the model into a Qt5-based GUI, allowing users to upload and classify cell images easily.**
    - **Optimized accuracy through Fine-Tuning and Hyperparameter Tuning.**

Skills

- **Programming Languages:**
  Python (Object-Oriented Programming), C++ (Basics)

- **Machine Learning & Artificial Intelligence:**
  Scikit-learn, TensorFlow, PyTorch, OpenCV
  Experience in building, training, and deploying ML and AI models
- **Natural Language Processing (NLP):**
  Text Analysis, Sentiment Analysis, Transformers, LSTM, GRU,
  Large Language Models (LLMs), Prompt Engineering
- **APIs & AI Integration:**
  Proficient in working with RESTful APIs and advanced AI APIs, including:
- **OpenAI (ChatGPT)**
- **Google Gemini (PaLM API)**
  Capable of integrating AI models into applications via custom pipelines and endpoints
- **Computer Vision:**
  Image Classification, Object Detection, Image Segmentation
- **Generative AI:**
  GANs, Diffusion Models, Text & Image Generation using advanced tools
- **Data Science & Analytics:**
  Data Cleaning, Analysis, Feature Engineering, Modeling, Visualization
- **Pipelines & Automation:**
  Building and managing pipelines for both Machine Learning models and Large AI Models
  (data preprocessing, model orchestration, deployment workflows)
- **Development & Deployment Tools:**
  Git, Google Colab, Jupyter Notebook, Streamlit, Flask
- **GUI Development:**
  Desktop application development using Qt5 and Tkinter
- **Data Structures & Algorithms:**
  Strong foundation in core concepts: Arrays, Linked Lists, Trees, Graphs