MOHAMMAD OWAIS

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Portfolio: owais-dev-port.vercel.app

Summary

Data Science and AI enthusiast with hands-on experience in Machine Learning and Natural Language Processing, specializing in NLP pipelines, semantic search, and end-to-end model deployment. Experienced in building personalized search systems and deep learning-based computer vision solutions.

Technical Skills

Languages: Python, C++, Java, C, SQL

AI/ML & NLP: Transformers, Deep Learning, Computer Vision, Semantic Search, Transfer Learning, Vector Embeddings, CNNs, Data Processing, Learning to Rank

Frameworks & Libraries: PyTorch, TensorFlow, Keras, Scikit-learn, Sentence-Transformers, FAISS, Pandas, SpaCy, NumPy

Web Development: JavaScript, REST APIs, Flask, React.js

Tools & Platforms: Git, GitHub, Linux, Docker

Projects

- **Personalized Context-Aware Gaming Search Engine** | *Python, Flask, React, FAISS*
  - Developed a full-stack search engine delivering role-based search results for gamers and developers.
  - Engineered dedicated web crawlers for automated data collection from IGN, GameSpot, and WorkWithIndies.
  - Implemented Selenium and Undetected-Chromedriver to bypass advanced anti-bot protections on dynamic websites.
  - Utilized Sentence-Transformers to generate 384-dimensional semantic embeddings for similarity-based retrieval.
  - Built a high-speed retrieval index using FAISS (L2 distance) with role-based re-ranking logic.

- **Food Classification and Calorie Estimation** | *Python, TensorFlow, VGG16*
  - Built a 36-class food classification model achieving 90.5% test accuracy using fine-tuned VGG16.
  - Applied transfer learning by freezing 14M+ pre-trained parameters to improve training efficiency and generalization.
  - Integrated a real-time calorie estimation module mapping visual predictions to nutritional data.

Education

- **Bachelor of Technology in Computer Science and Engineering**
- Relevant Coursework: Artificial Intelligence, Data Structures & Algorithms, Applied Linear Algebra, Probability and Statistics, DBMS, Deep Learning, High Performance Computing, Digital Image Processing.

Professional Certifications & Qualifications

- Qualified GATE 2025 – Data Science & Artificial Intelligence (DA).
- Cisco Certified Network Associate (CCNA).