

# MOHAMMAD OWAIS

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Portfolio: owais-dev-port.vercel.app

## Summary

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

## Technical Skills

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**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

## Projects

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- **Personalized Context-Aware Gaming Search Engine** | *Python, Flask, React, FAISS*
  - Developed a full-stack search engine providing role-based results for Gamers and Developers.
  - Engineered dedicated web spiders for automated data collection from IGN, GameSpot, and WorkWithIndies.
  - Implemented Selenium and Undetected-Chromedriver to bypass advanced anti-bot measures on dynamic websites.
  - Utilized Sentence-Transformers to generate 384-dimensional semantic embeddings for similarity-based retrieval.
  - Built a high-speed retrieval index using FAISS with L2 distance metrics and role-based re-ranking logic.
- **Food Classification and Calorie Estimation** | *Python, TensorFlow, VGG16*
  - Built a 36-class food classifier achieving 90.5% test accuracy by fine-tuning a pre-trained VGG16 model.
  - Implemented Transfer Learning to freeze 14M+ base parameters, optimizing the model for efficient training.
  - Integrated a real-time calorie estimation module to map visual predictions to nutritional data.

## Education

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

## Professional Certifications & Qualifications

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- Qualified GATE 2025 in Data Science & AI (DA).
- Cisco Certified Network Associate (CCNA).