Ziad Ahmed

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www.linkedin.com/in/ziad-ahmed-812624289   portfolio ↗

Education

Helwan University   *Sept 2021 – June 2025*

BS in Computer Science: Artificial Intelligence

- GPA: 3.2/4.0

Experience

Tazkarti – El Alamein Festival 2024   *July 2024 – August 2024*

- Worked as an Organizer and Usher during the El Alamein Festival 2024, managing large crowds and assisting in event coordination.
- Gained hands-on experience in public interaction, team collaboration, and on-ground logistics in high-pressure environments.
- Demonstrated excellent communication and problem-solving skills while ensuring a smooth experience for thousands of attendees.

Projects

Graduation Project: PROVA - Virtual Try-On Eyewear Application   Link ↗

- Built a full-stack virtual try-on eyewear platform using React 19, Node.js, Express.js, MySQL, and Prisma ORM, with JWT authentication and TailwindCSS for responsive UI.
- Integrated AI/ML components using MediaPipe for face detection, OpenCV for image processing, and CycleGAN with PyTorch to enable real-time glasses overlay and face shape analysis.
- Designed and developed a scalable backend with 15+ RESTful endpoints, leveraging Express.js, a normalized MySQL schema via Prisma ORM, and FastAPI for secure AI model deployment.
- Engineered and trained the core CycleGAN model for 111 epochs, reducing the final generator loss to 0.26 to achieve a realistic and accurate virtual glasses overlay.

Health Stroke Predictor   Link ↗

- Developed a stroke prediction model using a Decision Tree Classifier, effectively handling data imbalance with SMOTE to improve predictive performance.
- Implemented a complete machine learning pipeline, including comprehensive data preprocessing, feature engineering, and hyperparameter tuning with GridSearchCV.
- Designed and integrated a user-friendly Graphical User Interface (GUI) with CustomTkinter, allowing for interactive stroke risk prediction based on user inputs

Contextual Legal Summarizer   Link ↗

- Developed an advanced Natural Language Understanding (NLU) system for legal text summarization, leveraging state-of-the-art transformer models.
- Engineered a comprehensive data pipeline for processing and preparing large legal datasets for efficient model training and inference.
- Successfully fine-tuned and exported a robust summarization model, demonstrating expertise in deep learning for specialized NLP applications.

Transformer-based Speech Recognition System   Link ↗

- Developed an end-to-end Automatic Speech Recognition (ASR) system using a custom Transformer model in TensorFlow.
- Integrated Connectionist Temporal Classification (CTC) loss with a Transformer decoder for robust audio-to-text transcription.

- Implemented a comprehensive pipeline including MFCC feature extraction, Noam learning rate scheduling, and evaluation using Word Error Rate (WER).

Technologies

Languages: Python, HTML/CSS, SQL, JavaScript

Technologies: Numpy, Pandas, Tesnorflow, Scikit-learn, NodeJs, React

Software Skills: Git, Github.