HOSSAM HANY ELGANAINY
AI Engineer

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SUMMARY

AI Engineer and Backend Developer with 1+ year of professional experience and recent Artificial Intelligence degree. Proven freelancer delivering production-ready AI solutions serving 500+ users across healthcare, fitness, and safety applications. Strong expertise in PyTorch, Django, and full-stack AI development with startup environment experience. Demonstrated ability to manage complete project lifecycle from client requirements to deployment, achieving high-performance metrics including 95% model accuracy and real-time processing capabilities.

EDUCATION

Bachelor of Artificial Intelligence | Kafr El-Sheikh University, Egypt | Sep 2021 – July 2025
Coursework: Machine Learning, Deep Learning, Computer Vision, NLP, Data Structures, Algorithms

PROFESSIONAL EXPERIENCE

Freelance AI Engineer | Self-Employed | Cairo, Egypt | Oct 2024 – Present

- Delivered 3+ end-to-end AI solutions for diverse clients across healthcare, fitness, and safety domains
- Developed MeasureMeants body measurement platform achieving 95% accuracy with 35+ FPS real-time processing (Feb 2025)
- Built Sports Chatbot serving 500+ users with 120ms response time for personalized fitness recommendations (Apr 2025)
- Engineered real-time car accident detection system reducing emergency response time by 40% (Oct 2024)
- Managed complete project lifecycle from client requirements gathering to deployment and delivery

Backend & AI Developer | Cowdly (Startup) | Cairo, Egypt | Feb 2025 – Jun 2025

- Developed backend infrastructure and AI solutions for startup's core product offerings
- Built scalable APIs and integrated machine learning models into production systems
- Collaborated with cross-functional team to deliver AI-powered features from concept to deployment
- Contributed to rapid development cycles typical of startup environment with agile methodologies

Generative AI Trainee | DEPI, AMIT | Kafr El-Sheikh, Egypt | Apr 2024 – Nov 2024

- Engineered Generative AI solutions using neural networks and GANs for high-quality synthetic image generation
- Constructed 5+ NLP applications including sentiment analysis systems and conversational chatbots with enhanced user interactions
- Conducted exploratory data analysis (EDA) and applied computer vision techniques for visual analysis and feature extraction
- Collaborated on 15+ AI projects spanning computer vision, natural language processing, and generative modeling

PROJECTS

Islamic Chatbot – Conversational AI System (Backend & AI)

- Created NLP-powered chatbot trained on Islamic religious content using transformer models
- Configured Django backend with PostgreSQL database managing 10,000+ conversations and user data
- Optimized context-aware responses with 90%+ accuracy in domain-specific queries
- Launched public web interface with multilingual support (Arabic/English)

Text-to-Image Generator (DEPI & AMIT) (AI)

- Constructed GANs and Diffusion-VAE models for generating realistic facial images from text descriptions
- Utilized BERT embeddings for text understanding and DCGAN architecture for image synthesis
- Secured stable model training on CelebA dataset (200,000+ images) with enhanced image quality metrics
- Published model with REST API for integration into production applications

Arabic Text Categorization – NLP Classification (AI)

- Classified Arabic news articles into 7 categories using SANAD dataset (45,500+ articles)
- Applied advanced text preprocessing, feature engineering, and transformer-based models
- Obtained 92% accuracy using BERT-based Arabic language models
- Launched production-ready API processing 1,000+ classification requests per minute

PROFESSIONAL CERTIFICATIONS

Mathematics for Machine Learning | Imperial College London (Coursera)
Machine Learning | Stanford University & DeepLearning.AI (Coursera)

KEY ACHIEVEMENTS & IMPACT

- Successfully delivered 15+ production-ready AI applications with real-world client adoption
- Generated revenue through freelance AI engineering services across multiple industry verticals
- Integrated AI/ML models with scalable backend architectures in unified full-stack solutions
- Achieved consistent 30+ FPS real-time processing in computer vision applications
- Active GitHub contributor with 16+ repositories and 50+ collaborative projects

TECHNICAL SKILLS

Programming Languages: Python, SQL
Machine Learning & AI: PyTorch, TensorFlow, scikit-learn, Computer Vision, NLP, Deep Learning, Model Training, Model Optimization
Backend Technologies: Django, REST APIs, PostgreSQL, SQLite, Database Design
Frameworks & Libraries: OpenCV, NLTK, spaCy, MediaPipe, YOLO, Transformers
DevOps & Tools: Docker, Git, GitHub, CI/CD, Streamlit, Agile Development
Languages: Arabic (Native), English (Fluent)