

Mohamed Eltay

AI/ML Engineer & Data Scientist

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Professional Summary

Experienced AI/ML Engineer and Computer Engineer with Master's degree in Electrical Engineering specializing in Deep Learning and Machine Learning. Over 7 years of comprehensive experience in AI/ML model development, data engineering, software development, and research. Published researcher with proven expertise in developing scalable AI solutions, implementing MLOps practices, and translating complex data requirements into production-ready systems.

Core Competencies

- **Machine Learning & AI:** Deep Learning (CNNs, RNNs, GANs), TensorFlow, Keras, PyTorch, Scikit-learn, Model Optimization
- **Data Engineering:** ETL Pipelines, Data Mining, Feature Engineering, Statistical Analysis, Large-scale Data Processing
- **MLOps & Deployment:** Model Deployment, CI/CD, Docker, Kubernetes, Apache Airflow, MLflow
- **Programming & Development:** Python, SQL, R, C, MATLAB, Software Architecture, Automation
- **Visualization & Analytics:** Tableau, Power BI, Matplotlib, Seaborn, Dashboard Development
- **Research & Innovation:** Algorithm Design, Academic Publications, Experimental Design, Dataset Development

Technical Skills

Programming Languages: Python, SQL, R, C, MATLAB
ML/AI Frameworks: TensorFlow, Keras, PyTorch, Scikit-learn, MLflow, Hugging Face
Data Processing: Pandas, NumPy, SciPy, Apache Spark, Statistical Analysis
Visualization: Tableau, Power BI, Matplotlib, Seaborn, Plotly
Databases: MySQL, PostgreSQL, MongoDB
MLOps & Infrastructure: Docker, Kubernetes, Apache Airflow, Git, CI/CD
Cloud Platforms: Microsoft Azure, AWS, Google Cloud Platform
Development Tools: GitHub, GitLab, Jupyter, VS Code, Agile Methodologies

Professional Experience

AI/ML Engineer (Remote)

Outlier AI | Feb 2024 – Present

- Design and implement machine learning pipelines for diverse data modalities including computer vision, NLP, and audio processing
- Develop quality assurance frameworks and automated validation systems for large-scale ML datasets
- Collaborate with cross-functional teams to establish data annotation standards and improve model training efficiency
- Architect data processing workflows to handle complex datasets and edge cases for enhanced model performance
- Implement distributed computing solutions for processing multi-modal datasets at scale

Senior Electronics & Computer Engineer

Emad Gulf Trading Center | Dammam, Saudi Arabia | June 2016 – June 2025

- Architect and deploy enterprise-level AI/ML solutions integrated with existing IT infrastructure
- Develop Python-based automation frameworks and data processing pipelines for operational optimization
- Lead digital transformation initiatives including system modernization and cloud migration projects
- Design and implement data analytics solutions for performance monitoring and predictive maintenance
- Manage cloud infrastructure and implement DevOps practices for scalable system deployment

Graduate Research Assistant

King Fahd University of Petroleum & Minerals (KFUPM) | Dhahran, Saudi Arabia | June 2015 – June 2020

- Pioneered deep learning research in Handwritten Arabic Text Recognition using advanced CNN and RNN architectures
- Developed novel data augmentation techniques leveraging Generative Adversarial Networks (GANs) for improved model generalization
- Published three high-impact research papers in premier computer vision and machine learning venues
- Co-developed the KHATT-Arabic dataset, now widely used in Arabic handwriting recognition research
- Presented cutting-edge research at international conferences including ICDAR and IEEE venues

Systems Engineer

Al Aamri Trading Company | Al Khobar, Saudi Arabia | June 2013 – June 2016

- Designed scalable system architectures for telecommunications and computing infrastructure projects
- Conducted comprehensive technology assessments and solution architecture for enterprise clients
- Managed end-to-end system integration projects with focus on performance optimization and scalability
- Delivered technical training and knowledge transfer to engineering teams and stakeholders

Education

Master of Science in Electrical Engineering | 2020

King Fahd University of Petroleum & Minerals (KFUPM), Dhahran, Saudi Arabia

GPA: 3.5/4.0

Thesis: "Advanced Techniques in Handwritten Arabic Text Recognition using Deep Learning"

Bachelor of Engineering in Electronics and Telecommunications | 2013

Multimedia University, Melaka, Malaysia

GPA: 3.7/4.0

Final Year Project: "Digital Image Contrast Enhancement using Histogram Equalization and Adaptive Algorithms"

Certifications & Professional Development

- Oracle Cloud Infrastructure 2025 Certified AI Foundations Associate – Oracle (2025)
- DevOps Professional Certificate – PagerDuty and LinkedIn (2024)
- Google Data Analytics Professional Certificate – Coursera (2023)
- Google IT Support Professional Certificate – Coursera (2023)
- Business Analysis: Essential Tools and Techniques – LinkedIn (2021)

Publications

1. Eltay, M., et al. (2022). "Generative Adversarial Network Based Adaptive Data Augmentation for Handwritten Arabic Text Recognition." *PeerJ Computer Science*, 8, e861.
2. Eltay, M., et al. (2021). "Improving Handwritten Arabic Text Recognition Using an Adaptive Data-Augmentation Algorithm." *International Conference on Document Analysis and Recognition (ICDAR)*, Springer, pp. 322-335.
3. Eltay, M., et al. (2020). "Exploring Deep Learning Approaches to Recognize Handwritten Arabic Texts." *IEEE Access*, 8, 89882-89898.

Additional Information

- **Work Authorization:** Available for remote work globally and on-site work in UAE
- **Languages:** English (Fluent), Arabic (Native)
- **Availability:** Immediate start for new opportunities