

Shaimaa Kouka

Data Scientist

+971 567 619 400 | shaimaakouka@gmail.com | UAE

<https://shaimaak.github.io/portfolio/> , www.linkedin.com/in/shaimaa-kouka , <https://github.com/shaimaaK>

PROFESSIONAL SUMMARY

Determined and driven data scientist with a master's degree in Artificial Intelligence. Leveraging my strong technical skills in machine/deep learning for industrial and academic purposes. Possessing a solid foundation in machine/deep learning, mathematics, statistical analysis, data visualization, and dashboard tools, along with proficiency in SQL and programming. Collaborating with stakeholders on high-stakes projects with a keen focus on detail, ensuring precision and thoroughness in every aspect.

EXPERIENCE

Graduate Research Associate, Ajman University –AIRC

09/2021 – 12/2023

- Delivered over 6 research papers on machine learning and evolutionary computations.
- Partnered with Ajman Statistics Center to design and customize business intelligence (BI) and artificial intelligence (AI) tools, elevating data analysis capabilities and optimizing decision-making processes within enterprise environments.
- Facilitated and led over 5 workshops for masters in AI students, faculty at AU, and high school students, fostering collaborative learning environments, and skill development in the field of artificial intelligence.
- Established materials for laboratory sessions for Data Mining (MAI601) master's level course, including assignments and coursework as well as grading laboratory assignments and guiding students in their assignments and coursework.
- Instructed weekly hands-on sessions for over 20 master's students in AI, coding AI algorithms using open-source libraries as well as constructing AI solutions from scratch.

Software Engineer, Etisalat

06/2020 – 08/2020

- Executed fundamentals of data science and machine learning in automating tasks and analyzing databases using Python and R
- Developed web applications using REST API, docker, and version control tools Git, GitHub, and Bitbucket while tracking and managing the team's progress using Jira agile project management.
- Built e-commerce business website using CMS platforms.
- IoT-based automatic room temperature control project with Grafana monitoring system.

Teaching Assistant, Ajman University

01/2020 – 03/2020

- Coordinated, prepared, and executed bachelor's level laboratory classes of Introduction to Programming with MATLAB course (COE213), and Programming for Engineers (COE212) for the college of engineering and information technology.
- Guided and assisted 30 students in understanding object-oriented programming topics in C++ and engineering topics using MATLAB.
- Prepared programming exercises and assignments.
- Troubleshooted and debugged students' coding assignments and coursework errors and bugs.

EDUCATION

Master of Science in Artificial Intelligence

08/2021 – 12/2023

Ajman University, CGPA of **3.90/4.0** (honors students)

Thesis topic: "Improving Anomaly-based Network Intrusion Detection for IoT Systems using Artificial Intelligence"

Bachelor of Science in Computer Engineering

08/2016 – 08/2020

Ajman University, CGPA of **3.96/4.0** (honors students)

SKILLS

- **Artificial Intelligence:** Matlab, Keras, Tensorflow, Scikit-Learn, Pandas, Numpy, cuML, CuPY, cuDF, cuDNN, LSTM-cuDNN, PySpark, LLM, Llama2, Falcon, OpenAI, LangChain, HuggingFace
- **Business Intelligence:** Microsoft PowerBI, Tableau, SQL , Python, R, Streamlit, folium, Plotly
- **Coding Languages:** Python, JavaScript, Java, C/C++, Bash
- **Web Development:** HTML, CSS, JS, MongoDB, React, Node.JS, Bootstrap, JQuery, Streamlit, MUI
- **Deployment:** GIT, GitHub, Docker, Netlify, Heroku

PROJECTS

- **Conversational Agents using LLM Models:** Interacting with conversational agents using the following LLM models: Llama2(70B, 13B, 7B), Falcon(7B), GPT, and Flan UL2.
- **Public Transportation User Satisfaction Analysis Dashboard:** for Ajman Statistics Center, using Microsoft PowerBI and Python TensorFlow
- **Pro-task :** task management REACT application with voice command control using AI voice recognition model
- **Part of Speech Tagging (POS) for Arabic Language:** building Bidirectional LSTM model and K-Nearest Neighbor (KNN)
- **AI-based QSAR for Alzheimer's Disease:** AI-based Quantitative structure Activity Relationship study for Alzheimer's disease (Regression Problem). The models used: Random Forest, Gradient Boosted Regressor, K Nearest Neighbor, Support Vector Machine

WORKSHOPS

- Python programming fundamentals workshops
- Data preprocessing and data engineering using Python.
- Machine learning and artificial intelligence using Python.
- 3D game development using Unity Game Engine

AWARDS/RECOGNITIONS

- First Place in MERN Bootcamp, AstroLabs 03/2020
- Second Place in Data Science Bootcamp, AstroLabs 03/2020
- AU Students' Research Day, Ajman University 06/2020
- Honor Assembly (Gold medal), Ajman University 10/2019
- Honor Assembly (Silver medal), Ajman University 10/2018
- Honor Assembly (Bronze medal), Ajman University 11/2017

CERTIFICATION

- Linear Algebra for Machine Learning and Data Science, DeepLearning.AI 06/2023
- Natural Language Processing in TensorFlow, DeepLearning.AI 08/2021
- Convolutional Neural Networks in TensorFlow, DeepLearning.AI 05/2021
- Data Science Bootcamp , AstroLabs 05/2021
- Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning, DeepLearning.AI 04/2021
- Coding Bootcamp, AstroLabs 03/2021

PUBLICATIONS

- Kouka, Shaimaa, et al. "Recent Applications and Advances of Migrating Birds Optimization." Archives of Computational Methods in Engineering (2023): 1-20.
- Al-Zahra, Fatime, et al. "Machine Learning Approach for the Design of an Assessment Outcomes Recommendation System." 2021 22nd International Arab Conference on Information Technology (ACIT). IEEE, 2021.
- Kouka, Fatima Alzahraa, et al. "A Neural-Assessment System Based on Emirates (QFE)." Proceedings of the 2020 European Symposium on Software Engineering. 2020.