Hamza Shamieh

Data Scientist / AI Engineer

Interested in all that speaks in Data (Data Science, Financial Data Science and Customer Science)

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TECHNICAL SKILLS

AI Framewroks Pytorch, TensorFlow, Jax, Scikit- Learn, Matlab

Programming Languages Python, C/C++, Javascript

Technologies AWS, GCP, Linux, Docker

WORK EXPERIENCE

Senior Data Scientist / AI Researcher

Samsung R&D Institute

01/2024 - Present, *Amman, Jordan*

Achievements/Tasks

- Developed an Arabic language segmenter model within 2 months, achieving 95% accuracy.
- Created a probabilistic model for cleaning ASR data, reducing the Word Error Rate (WER) from 23% to 11%.
- Built an ITN (Inverse Text Normalization) model for Portuguese (BR), Spanish (ES, MX, US), Indian, and Arabic languages, achieving 92% accuracy.
- Developed a Pet Clustering model for Samsung devices using a new online clustering methodology I designed, achieving an F1 score of 82%.
- Collaborated with the research team on developing a new Proactive AI project.

Senior Data Scientist / AI Engineer

Orange Jordan

01/2023 - 01/2024, *Amman-Jordan*

Achievements/Tasks

- Developed a predictive model for revenue forecasting, enabling accurate revenue projections and supporting financial planning and budgeting processes.
- Implemented anomaly detection algorithms to identify and prevent fraudulent activities, resulting in significant cost savings and improved financial security.
- Utilized NLP techniques to analyze Customer feedback and Sentiment.
- Developed a human behavior simulation utilizing LLM's such as Mistral and Llama2. This simulation aids in comprehending behavior within environments by incorporating traits and characteristics derived from specialized algorithms that analyze raw data.
- Created a RAG system leveraging VectorDB to empower the LLM without fine-tuning, enhancing the chatbot's intelligence to respond to queries based on retrieved contexts.

Data Scientist / AI Engineer

Connected Motion(Part of TOYOTA Jordan (CTA))

04/2022 - 01/2023, *Amman-Jordan*

Markazia is a leading local automotive distributor, providing the Jordanian market with a wide array of total mobility solutions.

Achievements/Tasks

- Vibration detection Using GRU, LSTM and DeepSense architecture with Balance/Imbalance classification.
- Park detection, Car model detection and Car plate detection using YOLOv7 model.
- Phone Orientation angels correction using optimization algorithms (Kalman Filter and Factor Graph optimization). Car parts segmentation using Mask-RCNN with COCO annotation format.

- Data preprocessing and Deployment pipelines on AWS, Local servers with Docker. GNSS data correction using Extended Kalman Filter.

AI / System Engineer

Blink Networks

06/2020 - 04/2022, *Amman-Jordan*

Achievements/Tasks

- Designed a system capable of detecting the liquid type inside liquid tanks and developed a regression model to predict liquid depletion throughout the trip.
- Conducted vulnerability scanning by analyzing logs and employing a text classification model to detect undesirable log entries.
- Performed WISP customer and network analysis using detection models to classify and evaluate network performance.
- Monitored security across networks and web services.
- Utilized scripts (e.g., SNMP) and SolarWinds Security Event Manager for enhanced system monitoring.
- Configured MikroTik wireless systems, including routing, switching, monitoring, and security.
- Worked as a System Engineer managing both Linux and Windows environments.
- Configured DNS, proxy, and RADIUS servers on Linux and Windows platforms.
- Managed firewall configurations, including FortiGate, pfSense, and Sophos.

EDUCATION

M.Sc. Data Science

Princess Sumaya University for Technology

01/2024 - Present *Amman, Jordan*

B.Sc. Electrical Engineering

University of Jordan

09/2015 – 03/2020

Amman, Jordan

PAPERS AND PATENTS

Patent

Context-Aware Template Generation for Inverse Text Normalization

2024

Patent

Data Generation Pipeline with Online Learning for Seq2Seq Models using LLM

2024

Archived papers

- **Cognitive Radio : Multiple Radios for Fast Rendezvous and Handoff "Simulation by C++**
- **Cognitive Radio : Self Learning Dynamic Common Control Channel in Distributed Cooperative Cognitive Radio Networks "Simulation by C++"**

CERTIFICATES

Machine Learning and Reinforcement Learning in Finance Specialization - NYU Tandon School of Engineering (06/2026 - 12/2023)

Business Analytics Specialization - Pennsylvania University (03/2023 - 08/2023)

Deep Learning specialization – Andrew ng - Coursera (09/2019 - 11/2019)

Advanced Methods of Reinforcement Learning in Finance - NYU (06/2023 - 12/2023)

Machine Learning - Stanford university (07/2019 - 09/2019)

Linear Algebra - MIT course - MITOpenCourseWare (03/2021 - 04/2021)