Ali El-Khatib

Machine Learning Engineer · Data Scientist · Systems Engineer · Project Manager

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Skills

Programming	Python, R, Julia, Matlab, C/C++, LaTeX, SQL, HTML/CSS, *nix
Frameworks	XGBoost, TensorFlow, PyTorch, mlextend, NetworkX
Platforms	Tableau, Atlassian Suite, AWS Sagemaker, Athena, S3, CloudFormation
Languages	English, Arabic

Experience

Machine Learning Operations Engineer
Malvern, PA

The Vanguard Group
Feb 2022 - Present

- Designed and implemented end-to-end ML pipelines, including data preprocessing, feature engineering, model training, and evaluation, using **Python** and **TensorFlow**.
- Developed scalable infrastructure on AWS for deploying ML models in production using **Docker** containers & **Kubernetes**.
- Automated deployment processes and improved efficiency by creating CI/CD pipelines using **Jenkins**, enabling faster model iterations & reducing manual errors.
- Worked closely with data scientists and software engineers to integrate ML models into production systems, maintaining 99% uptime.
- Implemented monitoring and logging solutions to track model performance and detect anomalies, contributing to the improvement of model accuracy and stability.
- Conducted regular performance analysis and optimization of ML models to enhance efficiency and reduce inference latency.
- Collaborated with cross-functional teams to gather requirements, define project goals, and deliver successful ML solutions.

Data Scientist
Reading, PA

Penske Transportation Solutions
Jan. 2020 - Feb 2022

- Built and implemented artificial intelligence models (supervised & unsupervised) to identify patterns in vehicle diagnostic trouble codes
- Managed large terabyte-size datasets including Data ETL/ELT (Talend), relational databases (MSSQL, Snowflake), and various AWS Services
- Mentored new employees providing subject-matter expertise and experience resulting in 3 months reduction in new-hire orientation time
- Created and instructed training curricula for Python, R, MATLAB, Tableau, SQL, Git

Operational Excellence Project Specialist
Reading, PA

Penske Transportation Solutions
Aug 2019 – Jan 2020

- Created an in-browser GIS visual mapping interface for route analysis and location planning using JavaScript, HTML, and Bing Maps API
- Lead internal automation team achieving 90% reduction in effort associated with report generation and data analyses
- Developed and optimized facility-location allocation problems to identify optimal placement and of maintenance facilities to maximize business coverage

Operation Excellence Analyst
Reading, PA

Penske Transportation Solutions
Aug 2018 – Aug 2019

- Designed and maintained relational databases, stored procedures, reports, and data input interfaces using SQL Server, Oracle DB, AS400
- Eliminated 1.5 FTEs by automating classification of technician repair notes using NLTK and scitkit-learn

Education

Cornell University
Ithaca, NY

M. Eng. Systems Engineering · Computational & Data Science Certificate · Summa Cum Laude
Aug. 2018 - May 2020

West Virginia University
Morgantown, WV

B.S. Psychology · Summa Cum Laude
Aug. 2012 - May 2015