Ayman Fahsi

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SUMMARY

MS in Artificial Intelligence candidate (May 2024 grad.) seeking full-time roles in Data Science, MLOps, or ML Engineering. Skilled in data analysis, machine learning, and operational efficiency.

EDUCATION

B.S. Computer Science, M.S. Artificial Intelligence — **Illinois Institute of Technology | Chicago, IL**
GPA: 3.66

TECHNICAL SKILLS

Technical Languages: Python, R, SQL, PySpark
Related Tools: R Studio, Github, AWS, S3, EMR, ClickHouse, NumPy, Keras, TensorFlow, Scikit

WORK EXPERIENCE

Navistar Inc. | Data Science Intern — **May 2023 – August 2023**

- Fully implemented PySpark pipeline for large scale telemetric dataset to predict battery health in trucks.
- Extracted battery health patterns from 5.7 million rows nested time series data.
- Identified 14 key indicators of declining battery health and implemented filters to construct VIN Alert List system.
- Converted data preparation and feature engineering steps from Pandas to PySpark to improve runtime 100x.
- Visualized variables and explored relationships between data using matplotlib.
- Engineered features and constructed new dataset to train XGBoost model.
- Created a 10-page document summarizing project logic, methods, data analysis, function design, and pipeline framework and operation.

Exelon Summer Institute | Lead Computer Science Instructor — **Summers 2020 - 2023**

- Designed custom lesson plans to prepare incoming college freshman for Object Oriented Programming 1 and 2.
- Led a team of teaching assistants to teach in both classroom and one on one settings.
- Earned "Best CS Mentor" award three consecutive summers for exceptional mentoring.

Scarlet Data Studio | Software Engineer Intern — **July 2022 – August 2022**

- Utilized Python, Prefect, and Git to build and apply match generation functionality to Butterfly app.
- Implemented unique match generator for community members based on rarest interests.
- Designed and implemented cooperative in-app word guessing game.

PROJECTS

Computer Vision Implementation | *Nested Deformable Multi-Headed Attention Layer For Image Inpainting* — **April 2023**

- Corrupted HD face images from CelebA_HQ (30,000 images) using QD_IMD masks via custom python script.
- Implemented Deformable Multi-Headed Attention and several Gated convolution layers with Pytorch and OpenCV.
- Implemented UNet-like encoder-decoder network for baseline comparison.
- Wrote custom implementations for Peak Signal-to-Noise Ratio and Structural Similarity Index Measure to gauge metrics.

Deep Learning Implementation | *Emotion and Gender Classification Pipeline* — **October 2022**

- Employed various python libraries including NumPy, Scikit-learn, OpenCV, and TensorFlow, to implement architectures.
- Preprocessed FER-2013 (29,000 images) and IMDB Faces Only (460,000 images) datasets to train classifiers.
- Applied Data Augmentation to generate multiple classification models and evaluate metrics.
- Replicated classification pipeline and validated findings of Real-time convolutional neural networks for emotion and gender classification.