Aya Hourani

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PROFESSIONAL SUMMARY:

Data Scientist with a Master's in Software Engineering and hands-on experience building ML models, engineering features, and communicating insights through Python, SQL, and Tableau. Strong in statistical analysis, predictive modeling, and creating interactive dashboards to drive business outcomes.

TECHNICAL SKILLS:

- Languages: Python, SQL, MATLAB, JavaScript, C
- Libraries/Frameworks: Pandas, NumPy, Scikit-Learn, Tensorflow, Keras, PyTorch, Excel
- Visualization: Tableau, Power BI, Matplotlib
- Big Data/Cloud: PySpark, Google Cloud (BigQuery), AWS
- Other: Jira, Agile, Visio

EDUCATION:

RUTGERS SCHOOL OF GRADUATE STUDIES — New Brunswick, NJ

Master of Science - (M.S.) Software Engineering — Sep 2022 - Dec 2023

Relevant Coursework: Machine Learning for IoT, Software Engineering for Web Applications, Cloud Computing & Big Data

RUTGERS SCHOOL OF ENGINEERING — New Brunswick, NJ

Bachelor of Science - (B.S.) Electrical and Computer Engineering — Sep 2019 - May 2023

Relevant Coursework: Programming Methodology, Digital Logic & Design, Software Engineering, DSA (Computer Science)

PROFESSIONAL EXPERIENCE:

Westlock Controls - CRANE Chempharma & Energy Saddlebrook, NJ — May 2023 – Aug 2023

Software Cloud Developer Intern | Jira, Agile, Visio

- Led Jira implementation to enhance agile project tracking, boosting collaboration across 15+ team members.
- Mapped 20+ project development steps, enhancing data tracking and improving visibility into timelines and deliverables.
- Streamlined dual workflows into one process model using Visio and Jira, improving role clarity and project planning.
- Improved customer requirement traceability and milestone tracking across cross-functional teams.

PROJECTS:

Adversarial Image Classification | TensorFlow, CNN, PGD, Python — Sep 2023 – Dec 2023

- Achieved 95% classification accuracy on custom image datasets using convolutional neural networks.
- Simulated 3 adversarial attacks with PGD and improved model robustness by 40% through retraining, highlighting applications in fraud detection and AI security.

NBA History Data Analysis | PySpark, Pandas, Matplotlib, SQLite — Sep 2023 – Dec 2023

- Analyzed 70+ years of NBA data to uncover performance trends across teams and players.
- Built visualizations highlighting win/loss ratios, scoring trends, and gameplay evolution using Pandas and Matplotlib.
- Created animated player shot charts, enhancing insights for fan engagement and team strategy.

Atari Eye-Tracking ML Analysis | Python, Scikit-Learn, GMM — Sep 2022 – Dec 2023

- Analyzed human gaze patterns for video game performance using Atari Eye-Tracking dataset; engineered features across 150+ sessions.
- Applied clustering (GMM) and dimensionality reduction to uncover play behavior trends.
- Used silhouette scores (0.35-0.55) to validate cluster cohesion and performance correlation.

Stock Portfolio Web Application | Django, LSTM, Yahoo Finance API — Jan 2023 – May 2023

- Developed a Django web app that visualized stock trends across 3 industries using live data.
- Integrated predictive models (SMA, EMA, LSTM) and visual analytics to assist user investment decisions.
- Enabled interactive analysis of price change, market cap, and historical trends.