

# Aya Hourani

North Bergen, NJ 07047 | (201) 850-0130  
ayahourani@gmail.com | [LinkedIn](#) | [Portfolio](#)

## PROFESSIONAL SUMMARY:

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Aspiring Data Scientist with a Master's in Software Engineering and strong hands-on experience in Python, SQL, and data visualization. Adept at conducting exploratory data analysis, developing machine learning models, and communicating actionable insights through dashboards and reports. Seeking an entry-level data analyst or scientist role to transform data into business value.

## EDUCATION:

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### 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:

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### Westlock Controls - CRANE Chempharma & Energy

Saddlebrook, NJ

May 2023 – Aug 2023

#### Software Cloud Developer Intern

- Pioneered 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.
- Unified dual workflows into one streamlined process model using Visio and Jira, improving role clarity and project planning.
- Improved customer requirement traceability and milestone tracking across cross-functional teams.

## ACADEMIC PROJECTS:

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### 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 users to analyze price change, market cap, and historical trends interactively.

## TECHNICAL SKILLS:

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- Programming: Python, SQL, MATLAB, JavaScript, C
- Data Analysis & Visualization: Pandas, NumPy, Matplotlib, Tableau, Power BI, Excel
- Machine Learning & AI: Scikit-Learn, TensorFlow, PyTorch, Keras
- Big Data & Cloud: PySpark, Google Cloud (BigQuery), AWS