

# Kori Vernon

## Experience

- November 2022– Present **AI/ML Data Engineer, Associate, Institutional Securities Technology (IST), Internal Trading and Reporting Applications (ITARA), Morgan Stanley.**
- Integrate AI/ML practices into projects under the ITARA umbrella, facilitating the ingestion, processing, storage, and quality enhancement of data, as well as driving modernization efforts and creating APIs for Trading and Reporting Applications.
  - Developed a robust integration between a back-end daily execution prediction algorithm (seasonal ARIMA) and the user interface, utilizing Python and SQL (DB2) for seamless data management, and spearheaded tool deployment.
  - Spearheaded the development of a Data Quality Rule Suggestion Engine, leveraging advanced analytics to streamline the process of creating rules on datasets, thereby enhancing operational efficiency and facilitating tool management across the firm.
- February 2022– November 2022 **Automated Risk Trading Production Engineer, Analyst, Reliability and Production Engineering (RPE), Automated Market Making (AMM), Morgan Stanley.**
- Served as a Reliability and Production Engineer, providing comprehensive DevOps support to the Automated Market Making business that delivers billions of quotes per day over 15 exchanges in the United States.
  - Developed and implemented cutting-edge tooling, ensuring real-time monitoring of key business indicators.
  - Consistently enhanced existing systems and processes to optimize operational efficiency and ensure seamless trading activities.
  - Implemented report aggregation tool with dashboard for AMM DevOps, enabling efficient data management and issue resolution through loading, querying, exporting, and purging outdated data.
- October 2021 **Full Stack Developer, Private Equity Connection, New York.**
- Created web-based Private Equity LBO modeling application.
  - Utilized Python and Flask library to create a proof-of-concept web app for dynamically creating excel models.

## Projects

- April 2023– Present **Equities Monitor (EMon), Personal Project, Python, [emon.ahiasolutions.com](https://emon.ahiasolutions.com).**
- Leveraging yfinance, Interactive Brokers, Robinhood, and E\*Trade API's to automate portfolio management, and experiment with different options strategies through the use of equity options and stock.
  - Automated portfolio risk alerting leveraging E\*Trade API
  - Created Intraday Volatility Outliers Mean Reversion Options (IVOMRO) Strategy, which runs on 6,000 US Equities at 15-minute intervals, to capitalize on volatility outliers in market.
  - Consistently maintain and make tweaks to IVORMO strategy, which creates 'conservative' options positions, assuming underlying security to mean revert, and mitigates risk by promptly offloading unprofitable positions (see performance here: [emon.ahiasolutions.com/viewOutlierPnl](https://emon.ahiasolutions.com/viewOutlierPnl)) - Updates M-F in 15 minute intervals starting at 09:45.
  - Created Daily Scheduled Earnings Equity Options (EAO) strategy to capitalize on earnings, leveraging publicly available data, and historical performance (see query tool: [emon.ahiasolutions.com/earnings\\_leaderboard](https://emon.ahiasolutions.com/earnings_leaderboard)) - Updates M-F at 20:00.
- January 2022 **Tesla Fleet Management Application, Python.**
- Web application using Flask and Tesla API to see important diagnostic information, lock, unlock, and remotely start vehicles to make the process of managing Tesla rental fleets easier.
- December 2021 **License Plate Character Classification, Partner, Python.**
- Collected sample images of license plates and built license plate character classification models using Logistic Regression, Support Vector Machines, and Neural Networks.
  - Logistic Regression, and Support Vector Machine models yielded performance of 100% sample license plates.

## Education

August 2018– December 2021 **New York University, Tandon School of Engineering, B.S. Computer Science, Math Minor.**

**Relevant Coursework** Artificial Intelligence, Computer Systems Organization and Architecture (Verilog), Data Structures and Algorithms (Python, C++), Databases (SQL), Object Oriented Programming (C++), Machine Learning

## Technical Skills

**Languages** Python (Strong), C++ (Intermediate), SQL (Strong), Java (Intermediate), HTML/CSS (Previous Experience), Scala (Previous Experience).