

Ethan Vaz Falcao

Greater Boston

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EDUCATION

Worcester Polytechnic Institute

B.S. Data Science, B.S. Mathematical Sciences

05/2024

Relevant Coursework: Machine Learning, Algorithms, Principles of Real Analysis, Linear Algebra, Combinatorics, Probability Theory, Mathematical Statistics, Artificial Intelligence, Big Data, Business Intelligence, DataBases

Awards: Pi Mu Epsilon (U.S. Mathematics Honors Society)

Admitted: 04/2023

EXPERIENCE

Graph Mining

Worcester, MA

Data Analyst (Senior Capstone)

[Github](#) | 09/2023 - Present

- Developed an algorithm to label the status of 1,000+ GitHub repositories, saving significant hours in categorization.
- Analyzed GitHub repo commit trends showing inactivity shifts; developed a Power BI dashboard for insights.
- Identified and analyzed 35 "resurrected" repositories, uncovering key revival trends.

Schneider Electric

Boston, MA

Data Science Intern

06/2023 - 09/2023

- Constructed a predictive model with Python (PySpark) and random forest regression for quantitative analysis.
- Modeled an impressive 91% accuracy in accurately forecasting UPS Phase 1 sensor battery percentages.
- Successfully uncovered critical insights into battery aging, chemistry, and effective energy conservation over time.

United Solutions

Leominster, MA

Data Analyst Intern

06/2022 - 09/2022

- Developed Power BI dashboards to reduce report generation time by 30%, enhancing data-driven decision-making.
- Improved visibility of revenue trends and key metrics, aiding a 9.4% increase in year-over-year gross revenue.
- Automated daily labor productivity reports in Excel, cutting time and offering insights into labor productivity.

Clora

Boston, MA

Business Analytics Intern

06/2021 - 08/2022

- Conducted payroll analysis for 100+ healthcare consultants, ensuring 100% accuracy and contract compliance.
- Developed monthly financial reports, identifying cost-saving opportunities, leading to a 5% budget reduction

PROJECTS

Crypto Portfolio Optimization | Cryptogecko API, yfinance, ARIMA, XGBoost, LSTM

[Github](#) | 05/2024

- Leveraged CryptoGecko and Yahoo Finance for top 20 cryptocurrencies data, enhancing model inputs.
- Co-developed ML models (LSTM, XGBoost) with sub-200 RMSE, improving portfolio decisions by 20%.
- Implemented real-time data and monitoring, optimizing asset allocation and reducing errors by 15%.

Sentiment Analysis in Financial Markets | ApifyClient, yfinance, BERT, Scikit-learn

[Github](#) | 04/2024

- Utilized advanced NLP, including sentiment analysis and topic modeling, to analyze 10,000+ CNBC articles.
- Achieved a notable 85% accuracy rate in predicting stock trends from nuanced market sentiment.

Spotify Playlist Recommendation Algorithm | Spotipy API, Random Forest, LightGBM, Pipelines

[Github](#) | 11/2023

- Developed a playlist recommendation algorithm with Spotify API data using random forest and cosine similarity.
- Achieving 90% accuracy in personalized playlist recommendations from user-input playlists.

LEADERSHIP

Investment Club Project Manager

Worcester, MA

Worcester Polytechnic Institute

04/2024 - Present

- Managed and coordinated project timeline, ensuring seamless collaboration among members for successful execution.
- Facilitated the selection of appropriate optimization models for maximum portfolio efficiency during the project.

Data Science Club Treasurer

Worcester, MA

Worcester Polytechnic Institute

01/2023 - 01/2024

- Managed the club's annual budget, directly contributing to a 100% increase in club attendance.
- Conducted collaborative workshops with industry partners, to help students improve resumes and network

IT Volunteer

Worcester, MA

Catholic Charities

06/2022 - 09/2022

- Managed and co-directed the database migration to Salesforce, ensuring data integrity.
- Systematically maintained and performed critical repairs on various computer hardware and software.

SKILLS

- **Languages** - Python (PySpark, Pandas, Seaborn, Sklearn, Pytorch, Cuda, Or-tools), SQL, R
- **Tools/Techniques** - VSCode, Databricks, Jupyter, Azure, Excel, Git, Hugging Face, Tableau, Deep Learning