**AMRAM SHALOM BOUSKILA**

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**EXPERIENCE**

**Lead Machine Learning Engineer – Mitsubishi Power Aero, Inc. September 2023 – February 2024**

Glastonbury, CT

* Integrated advanced machine learning models, including supervised, unsupervised, and reinforcement learning techniques, to enhance predictive capabilities, anomaly detection, and feature engineering for real-time data analytics.
* Developed a comprehensive database utilizing Victoria Metrics, integrating advanced knowledge of Prometheus and PromQL.
* Engineered an object-oriented API for effective database read and write requests to all users in the Performance and Remote Monitoring Teams.
* Enhanced data visualization capabilities by integrating and customizing Grafana.
* Independently designed and developed data visualization software tailored for onsite engineers and analysts, improving their data interaction experience.
* Created a specialized object-oriented program for efficient reading and writing of UBIN (Unigraph Binary) files.
* Implemented seamless conversion between pandas dataframes and .ubin files, optimizing data processing and storage.
* Built a testing suite using Python’s unittest library to enhance stability of the UBIN program.

**Lead Software QA Engineer – Bank of America December 2022 – October 2023**

New York City, NY

* Work in an agile environment with project managers, business analysts, data scientists, quantitative analysts, QA engineers, software developers, DBAs, financial analysts, and trading strategists to design, develop, and operate systems and web applications that support and enhance data science products and workflows.
* Streamlined bug resolution processes, reducing software downtime by 30% and enhancing customer satisfaction metrics.
* Spearhead reporting and testing regulations including FINRA regulations, FIX (Financial Information eXchange) and CAT (Consolidated Audit Trail) Tech Specs.
* Document, record, and communicate structural reports, CAT Tech Specs and issues to QA, BA, and dev teams with Bitbucket, Jira, Confluence, Outlook, Excel, PowerPoint, Skype, and Webex.
* Develop and maintain object-oriented programs using Java and Groovy for performance testing and quality reporting, while leveraging Oracle SQL and MySQL to validate application functionality, data persistence, and data quality.
* Utilize Jira and JQL, Jenkins, TestNG, Ansible, Confluence, and Bitbucket for issue tracking, build management, wiki development, deployment tasks, and code sharing.
* Handle server interactions, job modifications, and permissions using Superputty, Autosys, Workbench, Kafka, Linux, and Apache Storm.

**Lead Data Science Software Engineer – Mitsubishi Power Aero, Inc. March 2022 – December 2022**

Glastonbury, CT

* Solely managed all aspects of data analytics, reporting, communication, automation, version control, package management, software development, ETL and CICD pipelining, and AWS cloud architecture.
* Supported the aeronautical engineering team with data science workflows including descriptive, prescriptive, and predictive modeling for turbine engine modifications and operations cycles.
* Developed an application for accessing and visualizing sensor data overlayed with statistical models, SARIMA and GARCH time series forecasting, and thermodynamic analytics using PostgreSQL and Python libraries, such as multithreading, multiprocessing, numpy, pandas, polars, matplotlib, seaborn, plotly, sklearn, statsmodels, tensorflow, keras, pytorch, scipy, and sqlalchemy.
* Coordinated with performance engineers and business analysts to set meetings and hit benchmarks using Microsoft Teams, Outlook, and Excel.
* Delivered and presented accurate and up to date reporting and analytics goals, as well as ad-hoc requests, to analytics teams using PostgreSQL, Python, R, PowerBI, and PowerPoint.

**Lead Biochemistry Research Analyst – FIU Biochemistry Department May 2018– May 2022**

Miami, FL

* Pioneered research on metal toxicity thresholds, leading to the publication of 2 peer-reviewed articles and enhancing industry standards for chemical safety.
* Devised experiments for spectrophotometric detection of both inorganic and organic variants of Arsenic, Beryllium, Lead, and other toxic metals, while studying the impacts of Vitamin C on Sargassum, Zebra Fish, Mahi-Mahi, and South Florida ocean water.
* Operated NMR, IR, GC, HPLC, SDS-PAGE, PCR, TLC, Melting Point Apparatus, Centrifuge, MicroLab, Drop Counter, Spectrophotometer, Analytical Balance, Ignition Tests, Sodium Fusion, Titration, Spartan, Avogadro, Potentiometric, Amperometric, and Conductometric sensors for the thorough analysis of organic and inorganic compounds.
* Created Standard Operating Procedures for every chemical in the stockroom to prevent danger in the labs.
* Employed R to build dose-response curves illustrating the mortality rate of marine life due to exposure to toxic metals.
* Developed machine learning models, including unsupervised clusters, supervised predictive models, multivariate A/B tests, and statistical models using R to analyze, visualize, and predict toxic metal concentrations in drinking water.
* Created interactive dashboards using Python, SQL, PowerBI and Tableau to visualize KPIs and to track research success.

**E-Commerce Reseller – Lifestyle Discounts LLCJune 2012 *–* May 2018**

Miami, FL

* Engaged in strategic negotiations with wholesalers in NYC and Miami to resell branded electronic items, home improvement tools, and phone accessories on Amazon’s FBA and eBay.
* Monitored all sales and return transactions using Python, R, SQL, Excel, and QuickBooks.
* Provided strategic consultations to fellow online electronics sellers on best practices for freight handling, return management, and SEO optimization.
* Scraped and automated migrations of web data to add more quality to sales analytics and reporting.

**PROJECTS**

**Machine Learning Engineer – Bio-Interactive AI Lifeline May 2021 – Present**

Miami, FL

* Spearheading the development of a cutting-edge AI-driven software designed to simulate the human body at a molecular level, integrating deep knowledge of physics and biochemistry to model cellular processes, molecular interactions, and organ system functions.
* Innovating computational methods to predict protein folding, neuronal activity, musculoskeletal dynamics, blood flow, and much more by incorporating lifestyle and genetic variables to simulate physiological and pathological conditions with high precision.
* Implementing state-of-the-art AI algorithms to predict complex biological outcomes, significantly reducing computational costs and improving the accuracy of simulations involving billions of cells and molecules.
* Providing a platform for simulating individual-specific responses to treatments and remedies based on genetic makeup and lifestyle factors.

**Machine Learning Engineer – Where Will It Go? LLC May 2018 – Present**

Miami, FL

* Oversaw end-to-end development of a trading bot applying statistics, calculus, machine learning, reinforcement learning for automated stock and crypto trading.
* Supervised team responsibilities, performance, standups, code development, and documentation using Outlook, Microsoft Teams, Zoom, Jira, Bitbucket, and Confluence.
* Utilized Python, Julia, Rust, C++, and PostgreSQL to fetch, store, and swiftly aggregate NYSE holiday and market data in real time from Financial Modeling Prep’s websocket API and form time-aggregated candlesticks and custom indicators to employ bots trained with fractal time analysis-based trading strategies.
* Built data visualization capabilities using HTML, CSS, JavaScript, Typescript, JQuery, JSX, React.js, Node.js, Express.js, and Redux to emulate TradingView’s UI/UX, with an incorporated visualization of multiple trading bot’s buy/sell activities.
* Optimized entry and exit strategies, as well as configuration values by deriving insight from performance analytics and machine learning grid searches.
* Created numerous indicators, comprised of price and volume momentum, strength indexes, convergence and divergence, accumulation distribution, LDA & QDA, PPI & CPI analysis, probabilistic distributions, as well as price adjustment to account for inflation.

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**EDUCATION**

FLORIDA INTERNATIONAL UNIVERSITY

**Bachelor of Science in Biochemistry Bachelor of Science in Natural and Applied Sciences**

**Minor in Computer Science**

**Minor in Mathematics**

**Proficiencies**

* Communicate technical solutions in a highly engaging and coherent manner focusing on the audience’s involvement.
* Collaborate with Data Scientists, Data Engineers, Data Analysts, Product and Project Managers, and enterprise stakeholders to deliver innovative, data-driven systems.
* Knowledgeable in ETL processes, data cleaning, manipulation, munging, wrangling, visualization, modeling, mining, migration, and scraping.
* Skilled in BI, ML, RL, AI, CNN, RNN, SOM, and NLP.
* Proficient in Linux, Windows, Python, R, Julia, SQL, JQL, DAX, C++, Rust, NPSS, Java, JavaScript, Typescript, Pinescript, HTML, CSS.
* Experienced with Git, Jira, Confluence, Ansible, Jenkins, Gradle, TestNG, Groovy, Kafka, Storm, Superputty, Prometheus, Victoria Metrics, Grafana.
* Native to Outlook, Teams, PowerPoint, Excel, PowerBI, Zoom, Skype, and Webex.
* Fluent in English and Hebrew.