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SUMMARY

Experienced structured finance & data professional, pursuing a Master's degree in Data Analytics (Dec, 2023 graduation) with a strong background in business analytics, data analytics, data science and structured finance. Skilled in coding with R, SQL, Python, and utilizing various libraries and tools for machine learning and data visualization. Expertised in leveraging advanced data science techniques to solve real-world problems across multiple domains including predictive analysis, fraud detection, and e-commerce analysis. Proven track record of successfully managing complex projects and teams, as well as driving operational efficiency and risk mitigation in roles at leading financial institutions.

SKILLS

- Coding (R, SQL, Python, Pandas, Numpy, ScikitLearn, XGBoost, Random Forest, Keras, TensorFlow, Streamlit, API's)
- Machine Learning (Regression, Classification, NLP, Neural Networks, Time Series, Predictive Analysis Tools)
- ML Techniques (Scaling, Dummy Encoding, Pipelines, Imputers, Cross Validation, Grid & Random Search)
- Data Visualizations (Matplotlib, Seaborn, GGPlot, Plotly, Tableau)
- Software (JupyterLab, Microsoft Office, GitHub, Google Colab, Google Big Query)
- Excel (Charts, Graphs, Index Matches, VLOOKUP's, Pivot Tables)

DATA SCIENCE PROJECTS

During my tenure at Canisius College over the past two years, I have effectively applied cutting-edge data science analysis and modeling techniques to address real-world challenges spanning various domains, such as Classification, Regression, Natural Language Processing (NLP), Time Series Forecasting, Recommendation Engines, and Neural Networks. Notably, I have successfully completed a diverse range of projects exemplifying my proficiency in these areas. Some notable examples include:

Buffalo 311 Call Predictive Analysis

- Employed the Buffalo Open API to retrieve and analyze a dataset comprising 288K 311 calls, enabling accurate prediction of hourly call volumes for future dates within a one-year timeframe. Employing a robust combination of FBProphet, XGBOOST, and AMIRA models, I successfully generated comparable predictions for call volumes. Notably, the occurrence of the 2023 Buffalo blizzard revealed the need to account for outliers to enhance the predictive capabilities for multiple years and evolving trends.

Hotel Cancellation Projections

- Utilizing a comprehensive ensemble of machine learning algorithms, including Random Forest, XGBOOST, Logistic Regression, and K Nearest Neighbor, I projected hotel booking cancellations. Through advanced hyperparameter tuning techniques, the XGBOOST model delivered outstanding results, boasting an impressive 87% accuracy rate. This analysis provided valuable insights for determining the optimal level of overbooking, enabling hotels to maximize profitability by managing cancellations.

Fraud Detection

- Employed advanced anomaly analysis techniques to conduct comprehensive bank fraud detection.

E-Store Analysis Using Big Query

- Leveraged SQL statements within the Google Colab environment to effectively query and extract data from the Big Query Ecommerce store dataset. Conducted a rigorous exploratory data analysis focused on profit and returns, leading to the identification of the top 20 percent inventory that was no longer viable for sale.

Credit Analysis

- Applied scikit-learn's logistic regression classification to determine default probabilities based on a comprehensive set of features including personal income, credit history, loan intent, home ownership, interest rate, and age. Demonstrating a remarkable test accuracy score of 85%, this analysis provided valuable insights into the probability of default for individuals in the dataset.

WORK EXPERIENCE

FIS (Fidelity National Information Services)

09/2021 – 04/2023

CLO Director, Remote

- Oversaw client services Middle Office team. Personally responsible for overseeing nine CLOs, three warehouse and one SMA.
- Managed team responsible for daily par & cash management of 20 domestic CLOs, three SMAs & seven warehouses.
- Was responsible for the allocation and timely reporting of monthly CLO reports and quarterly payment reports.
- Developed procedures that ensure processing functions are completed accurately and timely with minimal risk exposure.
- Monitored day-to-day activity of client's funds.
- Organized and presented monthly KPI's with client and trustee to ensure accurate and timely reporting and resolve any issues that may have come up in the prior month.
- Organized and managed warehouse closing operations to ensure tie-out to flow of funds and correct first loss equity provider PnL.
- Selected, developed, and evaluated personnel to ensure efficient operations.
- Established operational objectives, work plans, and assignment delegation.
- Projected bi-monthly equity waterfalls and summarized variances from prior waterfalls.
- Supported personnel at client institutions in day-to-day routines and financial processing.
- Ran pre and post trade compliance ensuring all CLO compliance test pass per loan allocations.

Hayfin Investments

09/2020 – 09/2021

CLO Portfolio Analyst / Junior Loan Trader, New York, NY (09/20 – 09/21)

- Oversaw the day-to-day loan allocations of all Hayfin domestic CLOs.
- Performed daily cash management on \$2.4 billion of domestic CLOs, which included projections for future cash from hypotheticals and/or loan refinancing's.
- Created and managed a new issue model portfolio for new CLO issuance tracking positions in evergreen warehouse as well as targeted secondary opportunities and TBD new issue assets. This spreadsheet was updated daily to prepare for new CLO issuance.
- Built CLO compliance model in excel to hypo identified secondary positions in preparation to go effective referencing all applicable tests in the indenture.
- Created new issue calendar tracking and allocation spreadsheet, tracking deals Hayfin played & passed on as well as tracking allocation amounts vs committed amounts.
- Was responsible for daily trade blotters, trade bookings, loan set up and allocation selection given individual portfolio risk parameters and Hayfin's internal rating system with position size matrix.
- Projected equity waterfalls and summarized variances from prior waterfalls.
- Presented weekly updates on all CLO fund and warehouse activity for the week.
- Ran pre and post trade compliance ensuring all tests would pass given loan allocation parameters.
- Generated trade ideas through daily DM & position size spreadsheet comparing WARF/DM against internally rated methodology.
- Created CSLI industry attribution spreadsheet comparing Hayfin industry returns & weights to the CSLI.
- Created & maintained approved loan list in IMGR to filter out loans that were not approved by investment committee.
- Created historical industry spread quartiles and standard deviation from the mean spreadsheet using historical CSLI spread data.
- Produced watchlist by tracking internal Hayfin rating movements, reported revenue & EBITDA of all Hayfin positions.

PineBridge Investments

01/2017 – 09/2020

Senior CLO Analyst, New York, NY / Los Angeles, CA (01/17 – 09/20)

- Oversaw the operations lifecycle of all PineBridge managed CLOs. This includes warehousing, closing, ramping, reinvestment period, reinvestment post reinvestment period, amortization & liquidations.
- Managed and trained outsourced operations and cash teams.
- Co-authored CLO excel model used to distribute weekly par-build in addition to concentration, coverage & quality tests.
- Researched and implemented S&P industry reallocation to improve CDO monitor.
- Trained offshore team on researching ratings and developed processes to notify data integrity of missing and stale data.
- Reviewed deal docs for post reinvestment trading opportunities per section 12.2.
- Experienced with CLO refi's, resets & re-issues. Includes interactions with arrangers, rating agencies, trustees & lawyers.
- Oversaw internal warehouse set up, funding request in addition to calculating first loss carry & IRR.
- Calculated and tracked monthly OC migration on CLO portfolios.
- Reviewed CLO CQM to efficiently manage CLO test triggers.
- Prepared reconciliations comparing key portfolio statistics between internal systems and trustee systems.
- Attended all daily credit meetings including new deal, relative value, and industry review discussions. These meetings provide insight and direction on how to hypo portfolios for stressed assets and/or new assets.
- Participated in bi-weekly CLO PM meeting to discuss portfolio analysis, deal pipeline, credit concerns, and cash management.

Ares Asset Management

09/2014 - 03/2016

CLO Surveillance Analyst, Los Angeles, CA (09/14 – 3/16)

- Modeled CLO waterfalls and compliance test metrics (eligibility criteria, collateral quality tests & coverage tests) as outlined in governing documents.
- Ran weekly CLO compliance surveillance on 3 billion dollars of CLO portfolios. Presented performance analysis, risks and commentary to portfolio managers, managers, and CFO.
- Created an excel heat-map to quantify and assess differences across all 2.0 CLO portfolios for various metrics such as issuer, industry diversification, OC, CCC, cov-lite, WARF, par gain/loss as well as other quality tests.
- Performed monthly calculations and analyzed NAVs on CLO's ranging from 420mm to 1.2 billion each.
- Ran waterfall projections and pro forma distribution analysis on assigned portfolios for portfolio management and finance teams.

Citigroup Global Markets Inc

05/2007 - 04/2014

VP/ Securities Finance Fixed Income Trader, New York, NY (05/13 - 4/14)

- Developed and conducted securities lending strategies for specific assets as well as "General Collateral" to maximize returns.
- Executed and booked Treasury and Agency loans on "Open" and "Term" with all Primary Repo Dealers on the street.
- Developed and executed investment portfolio management strategies to optimize investment income in accordance with a wide array of contractual guidelines and in a tightly controlled risk environment.
- Prepared investment performance reports and KPI's to be presented to management and to clients.

AVP/ Trading Assistant CDO Desk, Primary CLO Desk, TAP Desk, New York, NY (01/10 - 05/13)

Sales Assistant Dealer Desk, Buffalo, NY (07/09-01/10)

Trading Assistant TRS Desk / EM Desk, Buffalo, NY (05/08-07/09)

Trading Assistant Primary CLO Desk, Buffalo, NY (05/07-05/08)

EDUCATION

STATE UNIVERSITY OF NEW YORK (SUNY) BUFFALO STATE UNIVERSITY

2008

Bachelor of Science in Economics and Finance

CANISIUS COLLEGE

2023

Master of Science in Data Analytics