Ankit Agarwal

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SUMMARY

- Professional with 4-years of experience in **modelling data** of Global banks, emphasizing **statistical methods**.
- Proficient in using **Python** to build **vectorized econometrics** and **machine learning** models.
- Strong mathematical background; adept in **Linear Algebra**, Stochastic Calculus, and Differential Equations.
- Well-versed in risk management practices (including **BASEL/EBA** guidelines) and chartered **FRM** holder.

EDUCATION

Indian Institute of Technology, Kharagpur   June 2015 - June 2020
Integrated MSc in **Economics** with Minor in **Mathematics & Computing**; GPA (8.4/10); (IIT AIR 3611)

AREA OF EXPERTISE

Platforms	Python(Jupyter Notebook, VScode), R, C++, SQL, Tableau, Flask, Alteryx, Bloomberg, HTML
Quant/ML	Time series, Linear Algebra, Econometrics, OOPS, GLM, ANN, KMeans, SVM, Ensembling, PCA
Risk Model	Interest rate risk, VAR, Recovery & Resolution planning, Secured Funding, Credit Risk, Initial Margin

WORK EXPERIENCE

Nomura - Associate, Treasury Risk Management   Nov 2022 - present

- Extracted Nomura's historical **LTD funding rate** data using **MySQL** and compared it with peer banks' data (from **Bloomberg**) to estimate Nomura's debt **credit spread** across different maturities.
- Used **Tableau** to **visualize** drawn vs. total **commitments** for various products/clients, and aggregated daily data at a monthly level to smooth curves and **calibrate** outflow rates for each product type.
- Performed **sensitivity** analysis on Initial Margin SVAR model & **benchmarked** it against expected shortfall model.
- Conducted **backtesting** exercise for **Intraday model** (using python) by comparing modelled reserve against daily intraday requirement. **Kupiec POF** test was used to check the **significance** of breaches.
- Developed a **GUI** software to automate report writing, based on past reports resulting in **30%** increased efficiency.

Credit Suisse - Analyst, Liquidity Risk Management   July 2020 - Nov 2022

- Reviewed **Interest rate risk** regression model which regressed change in **NII** against CS **CDX** spread and interest rate. Non-parallel shocks were used to stress test the model according to updated EBA guidelines. Also, developed **python modules** by using **OOPS** to perform **regression tests**, and reduce future testing time by **90%**.
- Developed **LCR operational deposit** regulatory model based on # of monthly credits and debits in an account.

Ziploan - Data Scientist   May 2018 - July 2018

- Created features from data of NBFC customers using **coarse classification** on their features **Weight of Evidence**. Used these features and developed a logistic regression model (**88% accuracy**) to predict **default probability**.
- Developed **NLP model** to categorize bank statements by employing an Artificial **Neural Network** with **softmax activation** function and effectively classify bank statements into categories such as EMIs, credit/debit entries, etc.

PROJECTS

Ranking of Indian Mutual Fund Houses   Drive

- Developed a **gold**-winning analytical framework to rank Mutual Fund Houses. Applied **Vector Auto Regression** for quantifying responsiveness of the fund houses against macroeconomic shocks.

Data Scrapping Automation   Github

- Created a web scraper using **Beautiful Soup** to extract information from a listing website and automated the transfer of data (to Excel) using Selenium resulting in **10x** increase in efficiency.

Tableau Dashboard   Tableau

- Created a dynamic Tableau dashboard showcasing **Key performance indicators** of a retail business.

ACTIVITIES

Lawn Tennis   **Water Polo**, Interhall Gold   **Data analytics**, Captain Interhall   **Mentor**, Student Welfare