ANKIT AGARWAL

Financial Modeling ~ Data scientist ~ Economist

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SUMMARY

Experienced professional with 3.5 years of experience in financial risk modeling, emphasizing data analysis, visualization, and machine learning. Proficient in web scraping, web development, and Github, enhancing insight into upstream and downstream dependencies.

SKILLS

Languages: SQL, Python, HTML, CSS, RStudio, PySpark
Platform: Spark, Tableau, Flask, Alteryx, Bloomberg
Modelling: ANN, KMeans, SVM, PCA, GLM, Ensembling
Academics: Statistics, Time series, Vector Econometrics

PROJECTS

Feature Engineering
Credit Risk Modelling — **Github Link**
Probability of default of customers was calculated using their bank data. **Weight of Evidence** of features was used to create new features by coarse classification. **Logistic regression** was used to train the model.

Web Development
Blogging Website — **Github Link**
Developed a Python-based blog website using Flask, HTML/CSS, and SQLite. Admin capabilities include posting, editing, and deleting blogs. External users can register to view blogs, and post comments. Implemented secure storage of blogs/user data in a local SQL database with hashed passwords.

Tableau Dashboard
Dashboard for sales and profit of a company — **Tableau Link**
Created a Tableau dashboard showcasing **Key performance indicators** of a retail business. The dashboard has dynamic filters that allow the user to choose to customize the dashboard.

Web Scrapping
Data entry automation — **Github Link**
Created a web scraper using **Beautiful Soup** to extract relevant information such as Price, address, and link, from a flat listing website. This data is then entered into an Excel sheet using Selenium web driver.

Financial modelling
Ranking of Indian Mutual fund houses — **Drive Link**
Developed a gold-winning analytical framework to rank Mutual Fund Houses. Applied **Vector Auto Regression** (VAR) for quantifying responsiveness of the fund houses against macroeconomic shocks.

EXPERIENCE

Nov/2022 – Current
Associate, Treasury Risk Management — **Nomura**
- Leveraged Hadoop database via Tableau, accessed Nomura's internal database using **SQL**, and **Bloomberg** database (both directly and through the Excel add-in) to extract data.
- Employed Tableau for in-depth data analysis, assessing **model performance** at an aggregate level. Conducted **stress testing** on the Treasury's bond portfolio using Nomura's market system Totoro.
- Developed a **graphical user interface** (GUI) software enabling users to effortlessly create reports. The interface offers customizable options, including automatic section completion with predefined statements, or reuse of previously employed statements, or the ability to craft new statements.

Jul/2020 – Nov/2022
Liquidity Risk Management — **Credit Suisse**
- Assessed the relevance of assumptions and their alignment with the Credit Suisse portfolio.
- On the quantitative front, conducted rigorous testing for **regression models**, ensuring **normality**, **independence**, and homoscedasticity of residuals, as well as inspecting multicollinearity among independent variables and model linearity.
- Employed **RStudio** to filter a credit risk dataset comprising over 1.6 million rows & 130 columns. The refined dataset was used in evaluating the Probability of Default model for the sovereign client's portfolio.

May/2018 – Jul/2018
Data scientist — **Ziploan**
- Utilized **feature engineering** techniques to extract novel attributes from the available SMS data and a/c statements. These features were used to develop the **Probability of default** model.
- Developed an **NLP model** designed to parse and categorize bank statements. This approach involved employing a **Artificial Neural Network** architecture with a **softmax activation** function in the output layer to effectively classify bank statements into categories such as monthly transactions, credit/debit entries, cheque/EMI bounces, deposits, and more.

EDUCATION

Jun/2015 - Jun/2020
Integrated Msc (BSc + MSc) in Economics — **IIT Kharagpur**
GPA: 8.40; Minor in **Mathematics in computing** ; JEE Advance AIR-3600

Jun/2022
Chartered Financial Risk Management — **GARP**
Excellent percentile in all risk sections (including **Credit Risk** and Market Risk) in both part-I and part-II

ACTIVITIES

Lawn Tennis | **Water Polo**-Gold Medal | **Data analytics** - team Captain | **Mentor** - Student welfare