**Ayush Pradhan**

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[github.com/ayushpradhan-dev/Data-Science-and-Analysis-Projects](https://github.com/ayushpradhan-dev/Data-Science-and-Analysis-Projects)

**Personal Profile**

A highly motivated professional with a strong background in financial analysis, investment operations, and data-driven decision-making. Skilled in handling large financial datasets, improving process efficiency, and supporting asset management and operational teams. Experience in applying quantitative analysis, financial modeling, and risk assessment to optimize business outcomes. Looking to contribute analytical and problem-solving skills in a dynamic investment environment.

**Education**

**King’s College London**

September 2024 – Present (Expected 2025)

* Degree: MSc Data Science
* Modules: Statistics for Data Analysis | Computer Programming for Data Scientists | Machine Learning | Pattern Recognition, Neural Networks and Deep Learning | Databases, data warehousing and information retrieval | Big Data Technologies | Data Visualization

**Royal Holloway, University of London**

September 2019 – July 2022

* Degree: BSc Financial and Business Economics

Grade: First Class Honours

* Key Modules:

Quantitative Methods | Microeconomics | Macroeconomics | Corporate Finance | Financial Markets and Institutions | Financial Economics | Industrial Economics | Industrial Growth and Competition

**Skills**

* **Financial & Economic Modeling:** Market Trend Analysis, Financial Data Interpretation, Time-Series Forecasting, and KPI Analysis.
* **Investment & Asset Management**: Portfolio theory, Market Risk Modeling, NAV calculations
* **Financial Data Analytics**: Bloomberg Terminal, SQL for financial queries, Performance Attribution
* **Business Intelligence & Data Visualization:** Tableau, Power BI, Plotly, and dashboard development for data storytelling.
* **Statistical Analysis:** EDA, A/B Testing, Regression Models (Piecewise, Locally Weighted, Logistic), Hypothesis Testing, Bayesian Statistics.
* **Programming & Data Analysis:** Python (Pandas, NumPy, matplotlib,scikit-learn, TensorFlow), R (Tidyverse, ggplot2), SQL (advanced queries, CTEs & Window Functions), Git version control.
* **Machine Learning & AI:** Supervised and Unsupervised Learning (SVM, K-means, kNN, Tree-Based-Methods), Neural Networks (MLP, CNN, RNN).
* **Data Engineering & Management:** Relational databases (MySQL), NoSQL (MongoDB), Apache Spark, Cloud Computing (AWS), ETL Pipelines.

**Projects / Applied Coursework**

**Retail Sales Analysis & Report:**

* Assessed the impact of a new store layout on sales to provide data-driven recommendations.
* Conducted Exploratory Data Analysis (EDA) using histograms, scatter plots, and boxplots. Built a multiple linear regression model in R, controlling for store type and staff turnover.
* Identified key factors influencing sales trends and provided actionable insights for store optimization.

**Greydanus, Broekh and Associates (GBA) Yield Curve Analysis:**

* Conducted a bond portfolio management analysis for an investment firm, assessing yield curves, interest rate outlook, and investment strategy.
* Analysed the Porsche Bond, calculating duration and convexity, and assessed its suitability for portfolio inclusion.
* Evaluated risk-return trade-offs and compared investment performance against benchmarks.
* Received a high distinction for analytical depth and financial modelling skills.

**COVID-19 Data Analysis & Visualization:**

* Analyzed COVID-19 case trends over time to understand infection patterns and regional variations.
* Queried a public API to collect real-time COVID-19 data, processed it into Pandas DataFrames, and applied rolling averages. Created dynamic visualizations to display infection trends.
* Highlighted significant changes in case numbers over time, identifying periods of rapid spread and decline, which could support public health decision-making.

**Performance Sports Group (PSG) Investment Case Study:**

* Performed financial statement analysis using key ratios, common-size analysis, and year-over-year comparisons.
* Assessed investmentviability of PSG stock based on fundamental analysis.
* Applied investment decision-making principles to evaluate risk and return.

**Certifications**

**Google Data Analytics Professional Certificate**

Oct 2023 – Jan 2024

* Gained hands-on experience in data aggregation, cleaning, and organization with SQL and R to identify trends and relationships within data.
* Fluency with data visualization tools in tableau and R using the ggplot2 package to communicate findings.

**The Data Science Course: Complete Data Science Bootcamp, Udemy**

March 2024 – May 2024

* Applied K-means clustering for marketsegmentation and data standardization.
* Studied Bayesian inference, probability distributions, combinatorics, and both descriptive and inferential statistical methods.