Dev Prakash Srivastava

+39-379-211-4123 | dev.sriv99@gmail.com | linkedin.com/in/devpra | github.com/devpra1999

Education

Bocconi University — Italy
M.Sc. Economics and Social Sciences (GPA = 108/110) — *Sept 2022 – Dec 2024*

Indian Institute of Technology, Kanpur — India
M.S. Economics (GPA = 9.64/10) — *July 2021 – June 2022*

Indian Institute of Technology, Kanpur — India
B.Tech. Chemical Eng. (GPA = 8.3/10) — *July 2017 – June 2022*

Awards and Fellowships

IGIER-BIDSA VSI Fellow: Visiting Students Initiative 2023-24
Graduate Merit Award: Awarded by Bocconi University
KVPY (Young Scientist) Fellowship Award: Awarded the fellowship by Department of Science & Technology, Govt. of India. Secured a rank of 83 among 100,000 students across India

Exam Scores

GRE: 337/340 (Verbal = 169/170, Quantitative = 168/170)

Skills

Programming Languages: R, Python, MATLAB, C, SQL
Utilities: LaTeX

Research Experience

Demographics and Fiscal Sustainability — Feb 2025 – Present
Prof. Carlo Favero — *Dept. of Economics, Bocconi University*

- Constructed a harmonized cross-country panel (1950–present) for five Euro Area economies, covering demographic (age structure, migration, fertility, mortality), macroeconomic, and fiscal indicators.
- Estimated demographic-augmented models of growth, real interest rates, and fiscal balances. Simulated debt dynamics under future demographic scenarios and counterfactual fertility patterns.

Estimating Term Premia for the Euro Area and US — June 2023 – May 2024
Prof. Carlo Favero — *Dept. of Economics, Bocconi University*

- Constructed a panel database combining macroeconomic variables, survey expectations, and central bank guidance for five EU countries and the US.
- Estimated 10-year term premia using survey-based methods, a five-factor affine term structure model (ATSM), and a yield-drift-augmented ATSM.
- Built a Shiny web platform to disseminate findings and allow users to input custom macro-expectations to generate personalized term premia estimates.

Sentiment Embeddings for Return Prediction — Nov 2024 – June 2025
Prof. Carlo Favero — *Dept. of Economics, Bocconi University*

- Developed a full reproducibility package accompanying the forthcoming paper "Mispricing Proxies in Factor Models," enabling replication.
- Designed a pipeline that processes earnings call transcripts through a sentiment-fine-tuned BERT model trained on financial-domain text to generate time series of firm-level sentiment embeddings.
- Augmented the embeddings with contextual information from regulatory filings and financial disclosures using retrieval-augmented generation (RAG) techniques.
- Explored the predictive power of sentiment embeddings for asset returns in a cross-sectional and time-series framework.

Fragmentation Risk in the Eurozone Sovereign Bond Market Jan 2024 – May 2024
Prof. Carlo Favero *Dept. of Economics, Bocconi University*

- Developed an interactive RShiny dashboard to monitor real-time sovereign bond market fragmentation across Euro Area countries.
- Ingested market data via Python using Refinitiv APIs and processed macro-fundamentals in R to compute fundamental-implied yields and identify deviations in market pricing.
- Enabled automated visual tracking of risk premia and spread volatility across countries, updated with live data feeds.

Work Experience

Financial Modelling Intern April - July 2024
Rationis *Milan, Italy*

- Designed and implemented robust portfolio optimization pipelines using Random Matrix Theory (Marchenko-Pastur-based denoising and detoning), regime-aware covariance modeling, and hierarchical clustering techniques to construct stable GMV and Sharpe-optimal portfolios across multiple asset universes.
- Applied Nested Clustered Optimization (NCO) and recursive NCO to build stable portfolios in high-correlation settings such as Fama-French industry portfolios; employed hierarchical risk allocation via clustering and quasi-diagonalization.
- Designed a regime-aware portfolio optimizer, integrating regime-switching logic via covariance regime detection using different distance metrics, improving performance across crisis vs normal market regimes.
- Engineered a modular Python research pipeline for portfolio evaluation, including Sharpe ratios, rolling returns, turnover, and exposure control.

Relevant Coursework

Economics: Advanced Macroeconomics, Macroeconometrics, Monetary Policy, Econometrics, Financial Econometrics

Mathematics & Statistics: Real Analysis, Linear Algebra, Probability & Statistics, Time Series Analysis, Bayesian Statistical Methods, Applied Stochastic Processes, Computational Methods in Engineering

Data Science: Statistical Analysis using R, Neural Networks & Deep Learning

Computer Science: Data Structures & Algorithms, Fundamentals of Computing

Socials Sciences: Institutions, Government and Society I&II, Globalization, Divergence and Inequality

Social Initiatives

Volunteer July 2017 – April 2018
UBA, National Social Service *Govt. of India*

- Surveyed 20+ households in villages near Kanpur identifying the critical needs for sanitation and water management to develop a plan of action.
- Ran public health campaigns, sensitizing individuals about various facilities provided by the nearby government hospital, and general public health messaging.
- Organized English and computer classes for underprivileged children in multiple villages around Kanpur. Personally tutored a batch of 10 students (ranging from primary school to college)

Student Guide July 2018 – April 2019
Counselling Service *IIT Kanpur, India*

- Mentored a group of 8 freshmen, providing them holistic support to settle into campus life smoothly.
- Coordinated with 100+ other members to conduct Orientation '18 for 900+ freshers.
- Served as a link between the students and Counselling Service in identifying needful individuals.

Extracurriculars

Best Speaker, Galaxy Parliamentary Debate '19, an intra-varsity tournament of IIT Kanpur
Runners-up, National University of Judicial Sciences Parliamentary Debate '19 among 72 teams
Novice Semi-Finalist, IIT Bombay British Parliamentary Debate '18 among 150 teams