

Radhika Gulati

MSc Economics & Data Science @Warwick | 2+ YoE | Economic Modeling | Data Analysis | Economic Analyst
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PROFESSIONAL SUMMARY

Level 7 Economist with expertise in machine learning and econometric modeling. Conducted large-scale quantitative analysis on **730K+ financial records** and built a CNN model that improved performance by **46%** over conventional methods. **Gold Medalist** and conferred **the BPA award** for excellence in economic research.

RELEVANT SKILLS

- **Functional Competencies:** Data Analysis | Economic Modeling | Econometric Analysis | Forecasting | Trend Analysis | Policy Evaluation | Economic Impact Assessment | Research & Reporting | Data Gathering | Quantitative Research | Business Insight Generation
- **Technical Tools:** Advanced Excel | SQL | Stata | R | Python

WORK EXPERIENCE

Data Scientist Junior, BCG

May 2026

- Conducted a customer churn analysis, identifying key client datasets and applying a structured analytical framework to assess churn drivers, generating **3+** actionable business insights.
- Analysed customer data using Python (Pandas and NumPy), processing **1,000+** records and identifying trends through statistical analysis and data visualisation to support evidence-based recommendations.
- Developed and optimised a random forest model using quantitative techniques, achieving a **50%** recall rate in predicting customer churn and improving risk identification.
- Evaluated customer behaviour patterns through data-driven analysis, translating complex findings into clear economic and business implications for stakeholder decision-making.
- Produced a concise executive summary, communicating **4+** key findings and actionable recommendations to support strategic planning and informed decision-making.

Research Analyst : ESG-R&D and Cost of Capital, Warwick

March 2026

- Investigated how ESG-focused R&D moderates the relationship between R&D intensity and financing costs for Japanese technology firms across a **16- year cross- sectional panel** (2010–2025)
- Implemented two-way fixed effects estimation with propensity score matching and entropy balancing to address selection bias (cleaned and reduced to 818 observations across 85 firms for equity; 351 across 59 for debt)
- Tested lagged specifications across time horizons; found ESG-R&D reduces cost of equity with 2-year lag ($\beta = -0.122$), while relationship banking insulates debt costs ($\beta \approx 0$, stable)
- Conducted heterogeneity analysis by 3 ESG pillars (environmental, social, governance); social-focused R&D drives strongest equity

PROJECTS

● Corporate Investment & Policy Uncertainty :

- Processed a **1.75 GB institutional dataset of 730k+ financial records** to quantify policy uncertainty's impact on firm investment behavior, replicating a landmark economics paper (Baker, Bloom & Davis, 2016).

- Implemented high-dimensional fixed-effects panel regressions with Python PanelOLS, benchmarked against Stata estimators on large-scale panel data. Delivered rigorous causal estimates supporting macroeconomic policy evaluation.
- **Satellite-Driven Economic Intelligence :**
 - Engineered a CNN-based deep learning model to classify land use **across 34 European countries** from satellite imagery, generating a proxy for regional economic activity, outperforming traditional statistical models by **46% (R² 0.80 vs. 0.34)**.
 - Achieved 78% overall accuracy across 10 land-use categories, with Industrial and Residential zones detected at **90%+ precision**, enabling reliable tracking of manufacturing clusters and population density.
- **Occupational Text Classification & NLP Pipeline :**
 - Built a text analysis pipeline to **process 10k+ job descriptions** from US Labor Department data, automatically classifying roles and mapping hidden skill overlaps across industries.
 - **Achieved 90% accuracy** and ROC-AUC of 0.94, uncovering unexpected cross-sector overlaps (e.g., Legal and Construction) with direct implications for workforce planning and labour policy.
- **E-Commerce Price Scraping & Analysis :**
 - Scraped name, price, and URL data for **755 Pokémon across 48 paginated pages** from a live e-commerce site, parsing HTML structure via CSS selectors and automating multi-page crawling with a dynamic loop.
 - Cleaned raw HTML output into a structured **755-row dataframe** and analysed price distributions via frequency and proportion histograms, delivering a fully automated end-to-end data collection and visualisation pipeline.

EDUCATION

- **University of Warwick** 2025-26
MSc Economics and Data Science
Relevant Modules- Econometrics, Foundations of Data Science in Economics, Machine Learning & Big Data
- **Guru Gobind Singh Indraprastha University** 2022-25
Bachelors of Arts in Economics
Gold Medal (Ranked 1st in cohort) | CGPA- 9.65/10

KEY AWARDS AND CERTIFICATIONS

- Data Analytics — EduPlusOne (2025)
- Python for Data Science — EduPlusOne (2024)
- Programming for Everybody (Python) — University of Michigan, Coursera (2023)
- **Gold Medal (Ranked 1st in cohort)**- Awarded the University Gold Medal for academic excellence. Completed with top rank among all Economics Honours students
- Awarded 2nd Prize, **Best Paper - International Conference on Economics**, VIPS New Delhi
Title - Food Inflation: Evidence from Lebanon, Argentina and Venezuela (Undergraduate research paper, 2022). Analysed macroeconomic drivers of food inflation across crisis economies, focusing on currency instability, policy failures, and welfare impacts.