

# ARYAN MISHRA

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## LANGUAGE AND IT SKILLS

- Programming: Python (Advanced), SQL (Advanced), R (Intermediate), JavaScript (Basic), C++ (Basic).
- Tools: AWS (SageMaker, Kinesis, Glue, Redshift, Athena), Power BI, Git, Docker.
- Libraries: NumPy, Pandas, Matplotlib, Scikit-learn, TensorFlow, SciPy, Keras, spaCy, tidyverse.
- Spoken Languages: English, Hindi, French, Italian.

## WORK EXPERIENCE

**Prudential Financial** Newark, NJ  
**Senior Data Scientist - Marketing, Sales & Distribution** Feb 2023 - Present

- Constructed lead scoring models lifting user engagement by 30% across 5+ channels leveraging the Python data science stack.
- Utilized SQL to extract pivotal insights from multi-terabyte datasets, driving data-informed strategic decisions for executive leadership.

**Unilever** Trumbull, CT  
**Data Science Intern - R&D** Sep 2022 - Dec 2022

- Automated biomedical knowledge extraction via a Named Entity Recognition model, reducing processing time from 30 days to 15 seconds.
- Developed and deployed a custom fuzzy-matching model, accelerating product variant identification by 40%.
- Streamlined code and productionized preprocessing, training, and prediction endpoints through FastAPI - improving efficiency by 60%.
- Collaborated with senior developers in deployment pipeline integration and load/stress testing APIs - effectively debugging 100% of issues.

**Prudential Financial** Newark, NJ  
**Data Science Intern** May 2022 - Aug 2022

- Built a "Next Best Action" model to optimize lead interactions with LSTM neural networks, enhancing conversion rate by 59%.

**Focus Project Europe** Madrid, ES  
**Product Data Science Intern** Jun 2021 - Sep 2021

- Led design and implementation of a prototype grade prediction feature using a XGBoost model for an Ed-Tech start-up.
- Forecasted academic performance with 95% accuracy to design prototype. Later scaled to a user base of 5000 students.
- Authored a white paper promoting prototype and later presented it to over 5 educational institutions across Europe.

## RESEARCH AND PROJECTS

**Ask2.ai** New York, NY  
**Quantitative Researcher - Capstone Project** Sep 2022 - Dec 2022

- Created an automated pipeline to extract 700+ macroeconomic indicators from OECD, FRED, & World Bank with Python.
- Researched and applied a Hidden Markov model for market regime detection - leveraged Brownian Bridge imputation for missing data.

**Ardian** New York, NY  
**Data Scientist - Capstone Project** Jan 2022 - May 2022

- Forecasted one-month electricity price spikes using XGBoost model, potentially saving business \$8M on an annualized basis.
- Reduced noise in prior Ardian models with dimensionality reduction, resulting in a 43% improvement in performance.
- Built a Power BI dashboard to visualize backend model results and allow stakeholders to make business-critical decisions across 4+ groups.

**Bocconi University** Milan, IT  
**Research Assistant - Computer Vision (Bocconi-Gucci Lab)** Jun 2020 - Aug 2020

- Developed and applied 5+ Convolutional Neural Network (CNN) models for counterfeit brand identification and image embedding.
- Analyzed and web-Scraped over 100,000 images of various fashion brands to create an in-house dataset for fashion research.
- Programmed, tested, and fine-tuned architectures of various pre-trained CNN models with Keras, including VGG-16 & ResNet.

## EDUCATION

**Columbia University: Columbia Engineering & Columbia Business School** New York, NY  
**M.S. Business Analytics, GPA: 3.7/4.0** Feb 2023  
Courses: Deep Learning for FE & OR, Machine Learning, Optimization, Statistics & Simulation, Marketing Analytics.

**Bocconi University** Milan, IT  
**B.S. Economics & Computer Science, GPA: 3.8/4.0 (105/110)** Jul 2021  
Courses: Real Analysis, Advanced Statistics, Game Theory, Mechanism Design, Data Structures & Algorithms, Computer Programming, Econometrics.

## ADDITIONAL INFORMATION

- Co-Founder of Relevant Projects - an EdTech startup enabling disadvantaged students to engage with companies on high-impact projects, fostering creativity and bridging industry-academia gaps.
- Runner-Up Vodafone Italy "TOBi" Hackathon 2019 - optimized and enhanced Vodafone's chatbot using unsupervised machine learning algorithms. Subsequently endorsed by Vodafone on a national level.
- Interests: Foreign Languages, Psychology, Soccer, Sustainability, Innovation.