Simran Masand

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Education

University of California, Los Angeles (UCLA) **GPA: 3.9/4.0**
Masters of Engineering in Data Science
[Selected Courses: Natural Language Processing, Machine Learning in Bioinformatics, Reinforcement Learning, Neural Networks Deep Learning, Bayesian Inference and Causality] *Sep. 2022 - Aug 2023*

London School of Economics, (LSE) **GPA: 3.7 /4.0**
BSc. in Actuarial Science *Sep. 2013 - May. 2016*
[Selected Courses: Stochastic Calculus, Actuarial Life Modelling, Stochastic Finance, Generalized Linear Modelling]

Professional Experience

UCLA Technology Development Group

Biomedical Patents and Applications **Los Angeles, US**
New Ventures Fellow *Dec. 2022- Present*
- Fellow at UCLA's accelerator helping facilitate exit plans for campus technological innovations. As part of my role, I helped create licensing strategies for patented innovations across biomedical applications.

Barclays International

Group Strategy and Resolution Planning **London, UK**
Assistant Vice President *Sep. 2019 - Jun. 2022*
- Lead Model Developer proficient in developing financial valuation models for Bank of England Valuations in Resolution requirements.
- The models, built across Python, Excel and Alteryx, use hybrid of peer clustering from market reference data, forecasting methodology and traditional finance models of discounted cash flows and equity valuations to inform fundamental decisions regarding the operating strategy of the bank and its subsidiaries under resolution scenarios.
- Developed valuation framework and documentation for the Investment Bank Markets and Banking portfolio.

Rotational Finance Graduate Talent **London, UK**
Analyst *Nov. 2016 - Aug. 2019*
- I undertook 3 one-year rotations across different functions within Finance and Treasury: Independent Valuations Control (IVC), Product Control and Business, Processing and Analytics (BPA).
- I was the Correlation price testing lead for the Equities desk and developed frameworks to calculate model short-coming. I also developed Broker Quote parsers to ensure real-time calibration to external price markers.

Future Generali Insurance Solutions

Logistic Regression predicting policy lapses **Mumbai, India**
Actuarial Summer Analyst *Jun. 2015 - Sep. 2015*
- I developed a webscraper to generate competitors pricing table for comparable products. Additionally, I assisted in developing a probability regression model to predict policy lapses.

Projects

Offline Reinforcement Learning for Recomendation Systems *Nov. 2022 - Dec 2022*
Offline Reinforcement Learning to build an agent that can recommend music tracks to a user to minimize the skip rate. The underlying agent utilizes LIRD, an implementation of the Deep Deterministic Policy gradient algorithm, to optimize recommendations.[Blog]

Bechdel Movie Recommendation System: Content filtering model using NLP *Mar. 2020*
An ensemble model that utilises content filtering to generate recommendations for movie titles based on Bechdel Score match and content similarity. [Repo].

AirBnB Price Prediction Model: Clustering, NLP and Gradient Boosting *Jan. 2020 - Mar. 2020*
Creating a hybrid model that leverages text data from listings, performs sentimental analysis of guest reviews and listing features to generate price predictions. [Technical Notebook]

Skills and Interests

Interests Deep Learning, Machine Learning, Causal Inference, Statistics, Natural Language Processing
Technologies Python, MATLAB, PyTorch, Pandas, SciPy, SQL