UDIT NAGAR

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EDUCATION

SINGAPORE MANAGEMENT UNIVERSITY - Singapore	**Aug 2019 - Jul 2020**
CITY, UNIVERSITY OF LONDON – London, UK	**Jan 2020 - Apr 2020**
Master of Science in Quantitative Finance	

SRM INSTITUTE OF SCIENCE AND TECHNOLOGY – Chennai, India	**Aug 2012 - Jun 2016**
Bachelor of Technology (B.Tech/BE) in Information Technology	

- CGPA of **8.13/10.0** with First Class Honors

EXPERIENCE

ERNST & YOUNG (EY) LLP– Bengaluru, India	**Jul 2016 - Jun 2019**

Senior Software Engineer (Jul 2018 - Jun 2019) – Financial Crimes and Compliance

- Successfully deployed Actimize's Out-of-the-Box (OOB) Anti-Money Laundering (AML) rules using Oracle PL/SQL; extended to statistical analysis and reporting for a leading American Bank. (ANOVA, Outlier Detection, ATL/BTL Sampling etc.)
- Completed end-to-end migration of an existing transaction monitoring system (TMS), resulting in statistical improvements and operational efficiency (involved advanced regression techniques using H2O in R to predict accuracy)
- Extended deployment of the TMS mentioned above for a different LOB using agile testing methodologies and Monte-Carlo Simulations while managing a team of four.
- Detected illicit cryptocurrency transactional patterns using Python (BigQuery); extended to statistical analysis and reporting.
- Redesigned the alert generation systems by implementing customized rules that improved productivity, TAT and reduced false positives.

Software Engineer (Jul 2017 - Jun 2018)

- Developed Mantas based AML Scenarios using SQL Server and Python; procedures were tuned to scale for transactional data in millions.
- Classified the alerts into different risk categories using machine learning models; resulting precision-recall analysis were used to generate Suspicious Activity Reports (SARs).
- Automated the performance testing to verify the risk rating logic for an EY partnered leading French firm using VBA and R.
- Optimized the operational execution of the effective utilization calculation under the practice management team by leading a team of six alongside; reformed VBA execution quantifiable from ~3 hours to ~10 minutes.
- Presented the above-mentioned optimized calculation results at EY partners' meeting every month.

Associate Software Engineer (Jul 2016 - Jun 2017)

- Developed a testbed of quality assurance modules for various Mantas based AML Scenarios (Change in Behavior, Structuring, Rapid Movement of Funds etc.) by using R and VBA.
- Investigated the parametric impact behind alert generation logic of the pre-existing Threshold Tuning tool using Monte-Carlo Simulations.
- Facilitated the successful launch of a Threshold Tuning tool in production which analyzed millions of live transactions by extensively experimenting on its alert generation techniques.

ACADEMIC PROJECTS

- Determined implied volatility of different European Options Pricing contracts using Bachelier's, Black-Scholes' models; extended to static replication using SABR model calibration & dynamic hedging.
- Created a SPAN system across different F&O contracts to compare the margin calculated with and without netting.
- Compared different Machine Learning Classification methodologies (XGBoost, LightGBM etc.) over a financial dataset to detect fraud and delinquency patterns.
- Implemented stacking and blending of 5 Machine Learning models on an Advanced Housing Regression Competition at Kaggle (Top 18%)

ADDITIONAL

- Successfully achieved certificates by Indian School of Business, International Monetary Fund and Harvard-X on "Algorithmic Trading", "Financial Markets" and "Statistics and Probability on R" respectively.
- Technical Skills: **Python, PL/SQL (Oracle, MS), VBA, R, C++**
- Awarded two SPOT Extra Miler Awards and two On-Site Recognition Awards over different quarters for performing exceptional client services at EY.
- Organized and volunteered in various events for NGOs in India which included to help the underprivileged (2012-2016).