Rishikesh Ajay Ksheersagar

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PROFILE

Data Science professional with over 4.5 years of experience across Retail, Telecom and Healthcare verticals.

- *Skills:* Natural Language Processing, Machine Learning, Deep Learning, Statistical Analysis, Agent Based Models, Reinforcement Learning
- *Languages:* Python (Pandas, Dask, NumPy, ScikitLearn, Tensorflow, PyTorch, Keras, NLTK), SQL, R, PySpark, Java, C/C++
- *Tools / Platforms:* Snowflake, Hadoop, GCP, AWS, Jenkins, Tableau, PowerBI

EDUCATION

University of Michigan - Ann Arbor **August 2023 – May 2025**
Masters in Data Science, GPA 4.0/4.0 **Ann Arbor, MI**
Subjects: EECS 595 (NLP), EECS 545 (ML), EECS 598 (LLMs), STATS 503 (Multivariate Analysis), STATS 510 (Probability Distributions)

Savitribai Phule Pune University **June 2015 – June 2019**
Bachelor of Engineering in Computer Engineering **Pune, India**

PROFESSIONAL EXPERIENCE

MU SIGMA INC. **July 2019 - June 2023**
Data Science Manager *(August 2022 - June 2023)* **Bangalore, India**

- Managed 2 teams consisting of 16 data scientists working with Fortune-100 clients in Telecom and Healthcare domains, spearheaded the growth and management of engagements generating $1.5M annually.
- Engineered and implemented an advanced unbalanced multi-class classifier using RxMER data, stacking XGBoost and sequential Neural Network models, resulting in a remarkable 45% decrease in probable outages by precisely identifying causation of Modem Network Impairments in near real-time.
- Developed a PoC tool to simulate Patient Journeys in Clinical Trial by integrating Therapeutic Area, Site, PI, Patient, and Trial attributes, utilizing Bayesian Networks & Agent-Based Models to achieve 79% similarity with previous trials and enabling proactive planning and mid-trial adjustments for Phase 3 Clinical Trials.
- Drove RFP connects with CXOs of 2 Fortune-100 Telecom clients for adding new engagements to Mu Sigma's portfolio successfully.

Decision Scientist *(July 2019 - July 2022)*

- Led a team of 7 data scientists in identifying key features for degraded network service for the Data Science and Data Engineering team of a Fortune-100 Telecom clientele.
- Conducted EDA on 7 datasets including Cable Modem Registration, Speed Tests, Modem Utilization, and PNM (Proactive Network Maintenance, RxMER, FEC), achieving 98.7% accuracy in detecting degraded network service events.
- Delivered a dynamic State Table for real-time monitoring of Network Outages and Downtime for ~30M cable-modems, enabling preemptive rectification of outages leading to 37% less customer complaints in comparison to the historical trends.
- Assisted the FP&A team of the world's largest home improvement retailer to plan 11 retail metrics viz. Sales, Markups, Markdowns, Inventory, among others, for upcoming fiscal halves.
- Enabled Digital Transformation by migrating a legacy Store Planning tool, reducing execution time by 60%.
- Utilized Washout 2 and 3 constraint Optimization, along with Time Series models (ARIMA) to design Financial Plans resulting in the client organization exceeding planned Gross Margin by ~2% in FY 2020-21.
- Created 7 Tableau Dashboards to provide detailed insights and flag anomalies in Financial Plans, empowering Store Managers and Region Finance Leads to meet Sales targets in 63% more instances.

BMC SOFTWARE **August 2018 - April 2019**
Project Intern **Pune, India**

- Worked on a PoC which involved implementation of private Blockchain with voting-based consensus mechanism by leveraging Hyperledger Composer, in addition to a traditional Structured Database, in the backend of a globally used legacy ITSM Software.

ACADEMIC PROJECTS

- **RLHF for LLMs** (Jan 2024 - Ongoing) - Refining Natural Language Generation (Next Word Prediction) for T5 using Reinforcement Learning (Q-learning, PPO) from Human Feedback using Stanford Human Preferences data.
- **Is it easy to be Multilingual** (Nov - Dec 2023) - Explored mBERT's transfer mechanics, emphasizing syntactic, morphological, and phonological similarities as key predictors. Displayed language model performance's critical role in cross-lingual transfer. Proposed a framework achieving 62.5% accuracy in selecting optimal source language for multilingual cross-transfer. [GitHub]
- **Android Malware Detection** (Jan - May 2018) - Evaluated supervised signature-based, source-code-based, and permission-based malware detection methods. Received an F-1 score of 0.93 for classification of Malware by utilizing permission flow-graphs which are generated by analyzing permissions requested by the app. [GitHub]

HONORS AND AWARDS

- **Mu Sigma Inc.:** Received SPOT Awards on 3 occasions (Aug 2022, Aug 2021, Oct 2020) for exceeding project goals, delivering exceptional results and designing optimal solutions.
- Ranked 3rd for seminar on Android Malware Detection (May 2018).