



A sports enthusiast and Harvard certified data analyst with exceptional problem-solving skills, analytical mind. Loves challenges, thrives to solve complex business and research problems with versatile experience in data science including tools like Python, analytics, SQL, Excel etc.

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Vikash Agrawal, B Tech IIT Bombay 2021

Experience

PayPal | Data Scientist

April 2024 to Present

GUDR & Regrettable Friction KPI Owner

- Collaborating cross-functionally with strategy teams to translate data-driven insights into actionable policies, successfully balancing risk mitigation and minimizing friction for good users with total monthly transaction volume of USD 70 Billions
- Developed robust forecasting models using SQL and Python to actively predict portfolio health and to analyze transaction patterns, leading to a 9.5% YoY decrease in false declines for legitimate users while maintaining robust fraud detection.
- Acting as the key quantitative advisor in strategy sessions, conducting deep-dive analyses across diverse products to build tailored risk strategies, presenting data-backed recommendations that directly shaped business decisions on risk thresholds

Risk Decline and Onboarding funnel POC

- Engineered automated daily tracking systems for risk metrics like transaction declines & onboarding restrictions, enabling rapid identification of fraud trends, and forecasting impacts to aid mitigation strategies resulting in \$5M monthly savings
- Partnering with risk and loss teams to develop precise decline rules that balance fraud mitigation with revenue preservation.

Analytics

- Developed algorithms to forecast matured losses based on daily arrival resulting in 70% lower code execution times and 100% execution rates. Also developed methodology to scale loss data at granular levels using weight-based forecasting.
- Created an XG Boost ML model to predict transactional level losses in High-risk portfolio enabling more precise loss tracking
- Integrating AI to automate complex excel calculation into python scripts & summarizing fraud trends saving 10+ hrs monthly

American Express | Analyst-Risk Management II

May 2022 to Apr 2024

GPD-Lite (CA & MX) (Received VP Recognition)

- Conceptualized and created an internal prospect database and developed and risk filters to optimize ROI of marketing campaigns resulting in faster end to end acquisition of customers and savings worth more than 5 million USD.
- Developed a python script to apply all the suppressions deliver final campaign database tailored according to market requirements reducing the turnaround time from 5 days to 2 days.

Decline segmentation model

- Created a decision tree segmentation model for international markets to predict probability of card decline in order to suppress them in marketing campaign hence achieving more optimized campaigns.
- Used grid search to tune the hyperparameters and obtained a 1.5x increase in overall capture rate of declined cards.

Time To Target (Received VP Recognition)

- Innovatively developed Time to target, a forecasting model leveraging SQL and Python to predict the seasonal growth across different industries and targeting them accordingly, resulting growth in customer acquisitions.

Analytics

- Engineered a merchant recommendation algorithm, driving revenue growth by guiding customers to spending opportunities
- Pioneered the development of a Python based NPV(Net Present Value) model for prospect customers, refining the marketing campaign targeting. Also developed a robust validation algorithm to QC the model.
- Played a pivotal role in creating framework to evaluate and select data vendors based on key performance indicators like accuracy, fill rate, incremental records etc. hence optimizing vendor selection and reducing costs.

PharmaACE | Consultant-Advanced Analytics

Aug 2021 to May 2022

- Architected and implemented a sophisticated Salesforce Incentive model, resulting in a remarkable 90% satisfaction rate among sales representatives and a substantial 20% increase in quarter-over-quarter sales.
- Employed a strategic blend of Excel, SQL, and Python to revolutionize sales data, claims data, and physician databases through meticulous statistical analysis, forecasting, and report generation helping in business decisions.
- Innovatively crafted a dynamic sales tracker featuring live target tracking and goal meeting probability for various products, seamlessly integrating SQL database functionality with an Excel dashboard for enhanced monitoring and analysis.

Positions of Responsibility

Events Head, Hostel 2 IIT Bombay

Jul 2020 to May 2021

- Spearheaded the Events Council, orchestrating the seamless execution of over 50 events across diverse genres including sports, cultural, and technical, while effectively managing a budget of INR 6 lakhs
- Demonstrated adept leadership by overseeing hostel councilors and secretaries, ensuring the meticulous ideation, publicity, and flawless execution of events. Additionally, played a key role in enhancing hostel functionality & conduction of GCs.

Extra-Curricular

- Two-time silver medalist in the Department Badminton Open organized by ChEA, showcasing outstanding sportsmanship
- Achieved a commendable 3rd position in the Hindi essay writing competition organized by Hindi Pakhwara at ITB.
- Demonstrated intellectual agility as the runner-up in a challenging quiz competition and emerged victorious in the Arcade General Championship, attesting to a well-rounded skill set.
- Garnered recognition as the Most Viewed Writer on Quora in two genres, amassing an impressive 0.87 million views, underscoring impactful contributions to knowledge-sharing platforms.
- Attained the prestigious 5-star gold badge from Hacker Rank, a testament to exceptional proficiency in Python, highlighting technical expertise and critical thinking skills.

Awards

- **VP Recognition** (3x - AmEx) – For delivering sophisticated analytical solutions in time constrained environment.
- **Winner, ML Hackathon (PayPal)** – For developing loss forecasting model using Machine Learning
- **2nd Place, AI Hackathon (PayPal)** – For developing an LLM wrapper to summarize weekly fraud trends
- **Sports Color**, IIT Bombay – For contributions towards the hostel in sports general championship.
- **Organizational color**, IIT Bombay – For completing an exceptional and successful tenure as events head.
- **Silver Medal**, IBL (Badminton) – Part of silver medal winning team in Institute Badminton league.
- **Gold Medal** (Inter-school) – Three times back-to-back gold medalist in interschool badminton open
- **Bronze Medal** – District powerlifting competition, recorded a lift of 185kgs at 69kg bodyweight
- **National Finalist** (Mercedes Benz digital challenge) - Selected among top 30 nationwide teams to represent IITB

Skills

- **Python** - Udemy/LinkedIn/Hacker rank
- **SQL** - Udemy/LinkedIn/Hacker rank
- **MS Excel** - Udemy/LinkedIn
- **Data Analytics** - Harvard Business Online
- **Problem Solving** - Hacker rank
- **Hive/Spark**
- **MS PowerPoint** - LinkedIn
- **MS Word** - LinkedIn
- **Machine Learning** - Udemy
- **Forecasting/ Model building** - Udemy
- **LLM/ Prompt engineering**
- **Data science/ Predictive analytics** – Udemy
- **Risk Analysis/ Fraud detection/ Fraud mitigation**