Pradipt Kalamkar

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WORK EXPERIENCE & PROJECTS

Robinhood   **New York, NY**
Senior Associate & Tech Lead, *Risk Strategy and Execution*   *March 2025 - Present*

- Led Service Events (SEV) scoring automation using Python, SQL, and data lake pipelines, populating key risk fields. Enabled early detection of high-risk patterns and improved incident response time by **40%** via root cause analysis.
- Developed and operationalized **25+** Key Risk Indicators (**KRIs**) tied to SEV trends, customer impact, and systemic failures. Streamlined **FINRA's** 4530 compliance reporting and reduced manual effort by **60%**.
- Built dynamic dashboards in Looker and Coda for real-time analysis of event impact across business lines and product tracks; improved transparency into operational risk exposures and cut ROC risk review cycles by **35%.**
- Collaborated cross-functionally on **RCSA** development and **GRC** integration, mapping over **100** risk events to firmwide risk taxonomy and enhancing regulatory coverage for Options, Margins, and International trading tracks.

Jefferies Group LLC   **New York, NY**
Sr. Associate, *Compliance Tech, Risk & Audit Reporting*   *Aug 2022 – March 2025*

- Managed trade & communications surveillance by leveraging Python, Pandas, and SQL to develop and maintain data analysis systems for monitoring over **10,000** firm communications & more than **28 million** trading activities. Remodeled a robust Trading Framework for **1000+** financial instruments, enhancing efficiency and risk management.
- Utilized PowerBI to visualize data trends and detect insider trading, fraud, and other high-risk behaviors, resulting in the prevention of over **$1.5 million** in potential fines/penalties by **FINRA/SEC** & improved data quality by **25%.**
- Ensured **99.98%** trade reporting compliance by utilizing Python and MySQL to design and optimize trade reporting systems, achieving timely reporting of **800K** pre-trade, trade, and post-trade transactions. Leveraged AWS S3 for data storage, Kafka for real-time streaming and Tableau for creating interactive dashboards for compliance reporting.

Next Level 30   **Hoboken, NJ**
Analytics Engineer, *Marketing Analytics*   *May 2022 – Aug 2022*

- Analyzed data from **22.5K** customers by building data pipelines & analysis tools using Python, Pandas, and SQL to process data. Implemented ETL processes using Apache Airflow & backend services using Django & PostgreSQL.
- Used insights to guide marketing and product strategies, resulting in a **2x** increase in average customer engagement time, a **43%** decrease in dropoff rate, and the generation of **$100K** in ongoing funding over a **4-week** timeframe.
- Revised campaign strategies based on PowerBI analytics, developed data pipelines and interactive dashboards using PowerBI and SQL Server, and identified key attributes to boost brand awareness and program efficacy leading to a **23%** surge in monthly revenue & an **18%** increase in brand visibility.

Amazon LLC   **Mumbai, India**
Data Analytics Engineer, *Warehouse Security (Nimdex LLC)*   *Aug 2019 – Aug 2021*

- Engineered a highly accurate model using OpenCV, Python 3, NumPy, TensorFlow, and Keras for detecting unusual human activity at multiple warehouse locations, achieving **92%** accuracy and reducing false alarms by **23%**.
- Optimized image processing and shape analysis/detection models using OpenCV and scikit-image, resulting in **200x** faster performance and a **25%** increase in efficiency. Employed version control with Git and CI/CD pipelines using Jenkins and Docker. Implemented data processing pipelines using Apache Spark for handling large video datasets.
- Leveraged Agile methodologies to iteratively enhance the model and incorporated feedback loops for continuous improvement, using AWS Lambda for scalable data processing & REST APIs for seamless system communication.

Offside Detection in Soccer using digital Image Processing solutions (Capstone)   *Mumbai, India*

- Engineered an image processing model to improve the Video Assistant Refereeing (VAR) process, utilizing Python, NumPy, SciPy, Pandas, TensorFlow, and Google Collab IDE to reduce **98%** of processing time.

TECHNICAL SKILLS

- **Languages/DB:** C++, Python, Go, R, Java, Scala, SQL, Javascript, JSON, MySQL, PostgreSQL, MongoDB, Bash.
- **Framework/Libs:** React, Node.js, Django, Tensorflow, Pytorch, MapReduce, Flask, Hadoop, Spark, Airflow, Flink.
- **Tools:** Alteryx, AWS, Kafka, Git, Docker, Jenkins, Google Suite, Kubernetes, Databricks, Redshift, Lakehouse, Firebase, CI/CD, S3, Snowflake, Terraform, REST APIs, AWS Lambda, DBT, RDS, Glue, ETL tools.
- **Microsoft Power BI:** Prepare, Model, Visualize and Analyze Data & Deploy and maintain deliverables.
- **Cloud Computing Services: Google Cloud Platform:** Compute Engine, Virtual Machines, Load Balancing, Autoscaling, VPN, Disaster Recovery. **Microsoft Azure:** PowerShell, CLI, Resource Manager, DDoS Protection.
- **Other Skills & Operating Systems:** Web Scraping, Data Analysis, Pattern Recognition, Portfolio Management, JIRA, Scrum, Agile Methodology, MS Office-Word, Excel, Powerpoint, Windows 10/8/7, MacOS X, Linux.

EDUCATION

New York University - *Master's in Computer Science*   **New York, NY**

- Coursework: Design & Analysis of Algorithms, Database Systems, Computer Vision, Human Computer Interaction.

University of Mumbai - *Bachelor's in Computer Engineering*   **Mumbai, India**

- Coursework: Database Mgmt System, Computer Networks, Big Data, Data Visualization, Project Management.
- **Achievements**: Mathletes: Winner (2X), KIM talks: "Mathematics in Today's World", Hackathon 2019 Finalist.