

# Pradipt Kalamkar

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## WORK EXPERIENCE & PROJECTS

### Jefferies Group LLC

New York, NY

*Software Engineer, Compliance Tech, Risk & Audit Reporting*

Aug 2022 – Present

- Managed trade & communications surveillance by leveraging AI and Machine Learning algorithms with Python and TensorFlow to develop and maintain robust monitoring systems for over **10,000** firm communications & more than **28 million** trading activities. Utilized Apache Kafka for real-time data streaming.
- Developed and implemented Python-based detection algorithms to identify insider trading, fraud, and other high-risk behaviors, preventing over **\$1.5 million** in potential fines and penalties by **FINRA/SEC**.
- Ensured **99.98%** trade reporting compliance using Pandas, NumPy, SciPy and utilized Java to design and optimize trade reporting systems, achieving timely reporting of **800K** pre-trade, trade, and post-trade transactions and the identification and rectification of issues related to OATS, CAT, and other regulatory mandates.
- Remodeled a robust trading control framework for **1000+** financial instruments, enhancing efficiency and risk management, and deployed services on AWS for scalability and reliability.

### Next Level 30

Hoboken, NJ

*Software Engineer, Marketing Analytics*

May 2022 – Aug 2022

- Analyzed data from **22.5K** customers by building data analysis tools using Python, Pandas, and SQL to process customer data, including monthly active users. Implemented backend services using Django and 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. This led to a **23%** surge in monthly revenue and an **18%** increase in brand visibility. Delivered actionable insights to the marketing team using JavaScript, React, and D3.js for data visualization and AWS Redshift for data warehousing.

### Amazon LLC

Mumbai, India

*Associate Software Engineer, Warehouse Security (Kapstone 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%**. Employed version control with Git and CI/CD pipelines using Jenkins and Docker.
- Optimized image processing and shape analysis/detection models using OpenCV and scikit-image, resulting in **200x** faster performance compared to conventional methods and a **25%** increase in efficiency.
- Leveraged Agile methodologies to iteratively enhance the model and incorporated feedback loops for continuous improvement, utilizing Flask for model deployment & integrating 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.
- Facilitated the analysis of traditional VAR procedures by spearheading a **3-person** team in devising a faster solution that improved the game's quality. Generated actionable insights through data exploration and predictive modeling, resulting in increased accuracy and reliability of on-field decisions with an **85%** reduction in faults.

### Cryptoguru- A Live Cryptocurrency Price teller chatbot

Mumbai, India

- Developed an interactive chatbot with HTML, CSS & JS, responding to customer queries on live cryptocurrency pricing. Mined data from the Crypto Compare API improved loading times by **45%** & enhanced accuracy by **25%**.

## TECHNICAL SKILLS

- Languages/DB:** C++, Python, Go, R, Java, SQL, Javascript, Typescript, JSON, MySQL, PostgreSQL, MongoDB.
- Framework/Libs:** Angular, Spring Boot, React, Node.js, jQuery, Django, TensorFlow, Flask, NextJS, Pytorch, Spark.
- Tools:** AWS, Elasticsearch, Redux, JUnit, Jest, pytest, Kafka, Git, Docker, Jenkins, Ruby on Rails, Databricks, Redshift, DynamoDB, S3, Airflow, Hadoop, MapReduce, Firebase, Snowflake, Terraform, REST APIs, ETL.
- Microsoft Power BI:** Prepare, Model, Visualize and Analyze Data & Deploy and maintain deliverables.
- Cloud Computing Services: Google Cloud Platform:** Compute Engine, Virtual Machines, Cloud Infrastructure and Architecture, Load Balancing, Autoscaling, Kubernetes, VPN, Site Reliability Engineering, Disaster Recovery. **Microsoft Azure:** Azure Portal, PowerShell, CLI, Resource Manager (ARM), DDoS Protection, TCO Calculator.
- 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.