Pankaj Kumar

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EDUCATION

DUAL DEGREE, IIT KANPUR
Major in, Mathematics & Statistics
Minor in, Computer Science
CPI - 9.3/10| 2015 - 2020

COURSEWORK

COMPUTER SCIENCE
Data Mining
Machine Learning
Artificial Intelligence
Principles Of Database Systems
Data Structures and Algorithms

STATISTICS
Non-Linear Regression
Bayesian Analysis
Applied Stochastic Processes
Probability and Statistics
Linear Algebra

SKILLS

PROGRAMMING

Languages
• Java •Go • Python • C/C++

Frameworks & Libraries
• Spring Boot • Flask

Databases
• MySQL • Postgres
• MongoDB • Redis
• Influx DB

Message Queues
• Kafka • SQS • Rabbit MQ

AWS
• Route 53 • ECR • EC2 • S3
• Lambda fxn • Cloud Watch

Deployment
• CI/CD • Jenkins • Celery
• Docker • Kubernetes
• Git • GitHub Actions

Tools
• Maven • Bazel
• Junit • Mockito • Pytest
• JPA • Hibernate • SqlAlchemy
• gRPC, HTTP
• System Design
• Grafana, Newrelic, Retool

EXPERIENCE

OCROLUS | Software Engineer | New York, United States
Mar 2023 - Present | Detect Team

- Developed a **Detect service** that revolutionizing the lending industry. Empowering clients to detect suspicious documents seamlessly, it enables confident lending decisions and prevents the approval of fraudulent applications. Currently this service handles over **50k documents** per day.
- Successfully implemented a **cron job** with Celery for regular deletion of unverified/unsupported docs, preventing potential misuse of database.
- Engineered an innovative **migration service**, empowering fraud analysts to test new signals on production data for unparalleled precision, data clean up and release of new functionality without any disruption to the client experience.
- Successfully resolved the challenges related to SQS by seamlessly transitioning to Kafka. This strategic move enhanced reliability and scalability in messaging.
- Implemented a generic workflow using **Solid Principles** & **OOPs concept** to generate signals and visualization for different kind of docs like paystub, bs
- **Tech Used**: Python, Go | Flask | Pytest | Kafka, SQS | Postgres, Redis | Grafana

CLEARTAX | Software Engineer | Bangalore, India
Aug 2020 - Dec 2022 | GST Team

- Developed an E2E **indirect tax filing platform** capable of handling a monthly txn volume of 100k. Streamlined tax compliance processes, resulting in reduced errors, improved accuracy, and significant benefits for businesses and govt
- Proficient in all stages of the software development cycle using **Agile methodology**, from planning and design to coding, testing, deployment.
- Successfully refactored legacy code using **Design Patterns** & **Solid Principles**, resulting in a **25%** reduction in latency by eliminating deprecated API calls, **optimizing** various db queries, implemented IP address based rate limiting
- Created a **licensing** and **metering service** to enforce license purchases and renewals, effectively reducing instances of unauthorized use by **40%**
- Integrated **Govt APIs**, established **integration test** and **CI/CD** pipeline, configured monitoring tools like **metrics**, **alarms**, **logging**, and **dashboards**.
- Improved the **on-call** process by hosting training sessions, providing retools, and automating various processes, resulting in a **30%** decrease in ticket velocity.
- **Tech Used**: JAVA | SpringBoot | Junit | Kafka, SQS | Jenkins | AWS services | Docker, Kubernetes | MySQL, MongoDB, InfluxDB, Redis | Vault | Grafana

PROJECTS

TAXI FARE PREDICTION | Report, Prof. Faiz Ahmed
May 2019 – July 2019 | IIT Kanpur, India

- Designed model which predicts fare on various factors, with optimal accuracy
- Performed EDA on data using data visualization tools and techniques
- Employed Linear regression, Lasso, Random Forest and Artificial Neural Network models on the pre-processed data
- Model predicted fare with error $\pm 5\%$ compared to actual fare predictor device

ACHIEVEMENTS

- **Spot Award Winner**: For exemplary work done in licensing service project
- **Academic Excellence**: Received A* grade for exceptional performance in various courses in undergrad and postgrad