Alok Ranjan

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Experience

Senior Software Engineer August 2022 – Present
Level AI *Remote*

- Worked on designing data ingestion pipelines for multiple clients in a multi-tenant architecture across multiple channels (text, audio etc)
- Designed data pipelines for Slack for near real-time data ingestion
- Designed data pipelines for Twilio for batch data ingestion.
- Designed a secret store using HashiCorp vault to manage client secrets for backend services.
- Worked on designing an event-driven data platform for processing text and audio data.
- Created ETL pipelines using airbyte,dbt and Snowflake to create client-side shares.

Senior Software Engineer - ML December 2020 – August 2022
Bright Money *Bangalore*

- Improved on-boarding-funnel conversion by recommending subscription plans that are more suitable to the users with the help of user segmentation and charge prediction.
- Designed and executed multiple A/B experiments in the monetization workflow to improve the charge success rate.
- Designed a workflow that consumes funds from users' multiple funding/source accounts and distributes them to users' various financial destination accounts to ensure maximum financial gains for the user while adhering to the user and system constraints using Airflow and Spark.
- Implemented an algorithm to collect funds from non-recent and low-balance checking accounts without impacting the Overdraft rate significantly
- Took the initiative of setting up business, functional, and system monitoring across multiple services.
- Designed and implemented Automated Personal Finance Manager, a budgeting tool for tracking monthly finances for the user.
- Implemented multiple functionalities in the experimentation service, a service for creating user cohorts for A/B testing.
- Designed and developed multiple product features end-to-end, also involved in product discussions, analytics, and A/B testing, contributing to all stages of product life-cycle.
- Owned the ML models for *minimum amount due* and *interest rate* inferences, responsible for creating data pipelines, setting up metrics, and deploying in production.

Software Engineer July 2018 – Nov. 2020
Agility *Hyderabad*

- *Roles & Responsibilities*: Responsible for the design and development of ML/AI-related modules for MicroClear, an application to facilitate easier customs processing.
- Designed and developed a chatbot application to answer FAQs and consignment-related queries using *Google Cloud Platform* and *Dialogflow*. Also created a front-end interface in Angular and worked on *WhatsApp* integration.
- Trained and deployed an attention deep learning model (Dual Attentive Tree Aware Embedding) for risk prediction in customs consignment using Flask and Pytorch
- Built interactive Python dashboard applications for outlier detection and data visualization using Flask and JavaScript
- Worked on integrating back-end APIs with Alexa speech interface using AWS Lambda and AWS Gateway
- Worked on several Proof of Concept projects related to document classification, document parsing, and text recognition in German and Arabic languages using open-source tools

Technical Skills

Languages: Python, SQL, C/C++, Go, JavaScript
Frameworks: Flask, FastAPI, Django, Angular, Faust, Celery, Pytorch, PySpark, Socket.io, numpy, pandas, Pytest, airbyte, dbt
Developer Tools: Git, Postman, Jira, ClickUp
Technologies: Airflow, RabbitMQ, Redis, Kafka, Spark, AWS(S3, Athena, EC2, EMR, Lambda, Glue), GraphQL
CI/CD: Docker, Nginx, Jenkins
Monitoring: Grafana, Prometheus, ELK stack
Databases: Postgres, MongoDB, Microsoft SQL Server, ElasticSearch, Snowflake

Education

Indian Institute of Technology, Guwahati Guwahati

Bachelor of Technology in Engineering Physics, Minor in Mathematics *July. 2014 – July 2018*

Courses: Pattern Recognition and Machine Learning, Scientific Computing, Probability & Statistics, Introduction to Computing

Thesis: *Equilibrium properties of ultra-cold atoms in optical lattice* - Studied phase transitions of bosonic ultra-cold atoms from Mott Insulator to Super-fluid phase in an optical lattice

Projects

Style Transfer by transfer learning | *Python, TensorFlow*

- Implemented style transfer by using the pre-trained VGG-16 CNN model as a feature extractor to create stylized images.

Fractal images from complex functions | *Python, OpenCV*

- Study and analysis of fractal images from Julia sets of complex polynomial functions by Newton-Raphson root finding method and submitted a poster presentation for Indian Society of Industrial and Applied Mathematics.