Sanyam Lakhanpal

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SUMMARY

3 years of work experience in cloud-based CRM, machine learning, deep learning and deployment of data-intensive pipeline in production. Developed several customer-focused products while working in cross-functional environments, collaborated with a cohort of 6 on brainstorming, designing, and developing an automated end-to-end ML pipeline.

EDUCATION

Master of Science in Computer Science   **August 2021 - May 2023**
Arizona State University   **GPA:** 4.0/4.0

Bachelor of Engineering in Information technology   **August 2014 - May 2018**
Pondicherry Engineering College   **GPA**: 9.07/10

TECHNICAL SKILLS

Programming Languages: Python, Java, Scala, X86 Assembly, C/C++, CUDA parallel programming
Developer tools: Git, Docker, ELK, Kafka/RabbitMq, AWS, NGINX, Coral, Kubernetes, Spark, Tableau, Redis, Apache Hadoop
Frameworks: Spring MVC, Scikit-learn, Pytorch, Tensorflow 2, Cherrypy, Flask, Spacy, NLTK, Mxnet, ONNX
Others: React, JavaScript, NodeJS, DOM, SQL, Distributed Systems, Strong in Data Structures and Algorithms.

WORK EXPERIENCE:

Machine Learning Engineer | Zoho   **August 2018 - August 2021**

- Built the toolkit of explainable AI using "K++ Lime" and fast vectorized NumPy, which reduced the serving time for the existing model by 97% and bolstered the subscription sales revenue by $7 million in 2017.

- Implemented the Genetic algorithms and Bayesian optimization to build the complete "Auto-ML" training pipelines, which used the custom automatic feature engineering and data pre-processing transformers.

- Deployed the self-optimizing framework to production in a docker environment, which handled an average of 20K model training requests and 700K API (prediction) requests daily.

- Spearheaded the CI/CD pipeline design for this project, reducing the overall model training time by 78% and increasing the revenue by $800K per year.

- Rule-based and deep learning models were pre-trained on various data types to reduce the runtime of data type detection under 200ms (decreased by 86%) and achieved an F1 score of 0.89.

Intern | SDET | Amazon | India   **Jan 2018 - April 2018**

- Collaborated with the "Kindle" team on the feature customer notification service to develop a REST API using the coral framework (internal framework) and EC2 compute.
- The service alerted the employees through email and chat notification, about the feature owner identification related to bug tickets, thus improving the productivity of the tasks by 13%.

ACADEMIC PROJECTS:

- **Santander-customer-transaction-prediction (Top 7%):** Predicted the trend of the customers in Santander bank related to their specific transactions by implementing the custom feature engineering, clustering, which reduced future frauds by 27%.

- **Conversational AI | NLU Chatbot:** Designed and developed chatbot from scratch using open-source framework Rasa, by improving the intent detection mechanism and experimenting with variously named entity recognition (NER) techniques.

- **Adversarial Attack:** Prototyped a text-attack (BERT and GPT2 attack) on the IMDB movie review dataset using text-fooler to poison the data and reduce the accuracy of the trained deep learning network by 4%.

- **LANL earthquake Prediction, Kaggle (Time Series)**: Utilized the audion seismic signals to predict the timing of laboratory earthquakes formulated the time-based statistical trend features (using Auto-Arima), which increased the probability of detecting the earthquake by 4%.

AWARDS AND LEADERSHIP:

- Won solo bronze medal in Kaggle competition Bank Fraud Detection.
- Github arctic code vault contributor.
- 2nd Rank holder in the Information technology department for 4 years.
- Conducted interviews and mentored 3-interns at Zoho for the project in Explainable AI.