Prakhar Acharya

Senior Machine Learning Engineer

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LinkedIn | Github

TECHNICAL SKILLS

Python | SQL | BigQuery | Machine Learning | Data Science | Statistical Modeling | Data Analysis | Data Visualization | Data Warehousing | GCP | AWS | APIs | Document AI | Vertex AI | AutoML | Kubernetes | Docker | Airflow | Deep Learning | Computer Vision | NLP | Tensorflow | Pandas | Scikit-learn | Numpy | Looker | Time Series | Vision | Pylint | Technical Design Documentation | MLOps | Git

WORK EXPERIENCE

12/2022 - Today

Senior Machine Learning Engineer
Quantiphi Analytics, Bangalore, India
Project: NeuralOps - Inhouse Quantiphi product which was implemented on AWS and then also currently migrated to GCP, where a user can come with the basic data/complicated one and with their git repo attached to the platform can do the component analysis: preprocessing, training, monitoring, explainability and the end-to-end pipeline deployment as well involving retraining. This was a large scale project and the team structure was of 6 members with 2 being MLEs and I was the leading member of the team.
Technologies used: Python | Bigquery | GCP | AWS | Apache Airflow | Terraform | Docker | Git | Pylint | MLOps | Google Cloud Storage | EC2

04/2022 – 11/2022

Senior Machine Learning Engineer
Quantiphi Analytics, Bangalore, India
Project: OI Soft - Data management platform used to analyze sensor data and detect anomalies within the electrical production process for US company OsiSoft in partnership with Google. Working in a team of 7 people and comprising 2 MLEs to develop an end-to-end deployable ML solution framework using Python, Tensorflow, Vertex AI, Airflow. I worked on the entire pipeline orchestration including training, retraining, hyperparameter tuning and passing the results through BigQuery to Grafana. The prediction of anomalies is done through batch data.
Technologies used: Python | Bigquery | GCP | Dataflow | Vertex AI | Apache Beam | Apache Airflow | Grafana | Docker | Git | Pylint | MLOps | Google Cloud Storage.

07/2021 – 03/2022

Senior Machine Learning Engineer
Quantiphi Analytics, Bangalore, India
Project: Ryan Speciality Group (US insurance company) - Entity extraction project in partnership with Google. RSG has thousands of policy documents where entities (e.g. policy type, property value, business type) have to be extracted for analysis. I'm leading an agile team of 6 to develop an end-to-end Doc AI solution pipeline built on the Google Cloud Platform environment. 100k+ different documents are uploaded by the user into the cloud storage buckets, then the entity extraction API comes in and stores the results in respective bigquery tables. For each document type, a final consolidated report is generated using the data present in each individual table in a

format similar to the validation report shared by RSG and has been shared as a deliverable. This solution helped the clients by reducing document processing time due to the automated pipeline, reduced manual dependency and improved decision making.

Technologies used: Python | Cloud Storage | Cloud Function | Cloud Run | Form Parser API | AI Notebook | BigQuery | Docker | Git | Pylint

10/2020 – 06/2021   **Machine Learning Engineer**
Quantiphi Analytics, Bangalore, India
Project: AD Accelerator - Data management platform used to analyze sensor data and detect anomalies within the electrical production process for US company OsiSoft in partnership with Google. Working in a team of 15 people and comprising 4 MLEs to develop an end-to-end deployable ML solution framework using Python, Tensorflow, Vertex AI, Airflow. I worked on the entire pipeline orchestration including training, retraining, hyperparameter tuning and passing the results through BigQuery to Grafana. The prediction of anomalies is done through live streaming and batch data. The platform allows users to predict machine downtime through anomaly detection for any numeric time-series data at scale, with minimal configurations on GCP.
Technologies used: Python | Tensorflow Estimators | Autoencoders | Bigquery | GCP | Dataflow | Vertex AI | Apache Beam | Apache Airflow | Grafana | Docker | Git | Pylint | MLOps | Google Cloud Storage.

10/2019 – 09/2020   **Analyst**
Aspire Systems, Chennai, India
Project: Object defect detection for ITT Milano (Partner Google) for detecting defects in brake pads analyzing 500k+ brake pads a year. I worked in an agile team of 6 developing the image defect detection application using Python, AutoML Vision & Yolov4. The application is analyzing a brake pad image from 6 different angles and discovers defects in 15 seconds. I received data which was highly biased (90% of images being not defected), so I had to work balancing out the bad images so that the model does not give biased results. I also worked on the initial tagging of images with the client.
Technologies used: Python | AutoML Vision | AI Platform | Docker | Cloud Function | Git | Pylint | Google Cloud Storage.

08/2018 – 09/2019   **Analyst**
Aspire Systems, Chennai, India
Project: Michigan Department of Transport (MDOT) road transportation and safety analysis in partnership with Google.The aim of the project was to use this open source data to analyze the crashes and using data analytics and AI/ML automated mechanisms, build descriptive reports which can help the MDOT officials in analyzing the crashes and improve safety measures around it. I also implemented clustering algorithms (DBScan) to identify and localize accident hotspots and assign severity index (on the level of being danger prone) to these hotspots so that policy decisions can be based on this knowledge. Further, a predictive model (Negative Binomial Model) was built to predict the number of crashes, which could help in mitigating crashes and fatalities, and consequently build a better road safety culture.
Technologies used: Python | Big Query | Looker | AI Platform | Cloud Storage | BigQuery | Git | Pylint | Google Cloud Storage.

EDUCATION

06/2014 – 06/2018   Bachelors of Technology, Electrical and Electronics Engineering
                        Vellore Institute of Technology, Tamil Nadu, India

ACHIEVEMENTS / CERTIFICATIONS

Regional Mathematics Olympiad - Rank 4 (2012 and 2013) | Google Cloud Platform - Associate Cloud Engineer (2021) | Google Cloud Platform - Professional Machine Learning (2021) | Amazon Web Services - ML Speciality (2021) | #Inspire Award for OSISoft project(2023)

LANGUAGE SKILLS

English | Hindi