Sowmya Yellapragada

Machine Learning Engineer

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About me

I am an experienced software engineer with a proven track record of designing and implementing an ML infrastructure platform to streamline and optimize end-to-end ML pipelines.

I am adept at collaborating with cross-functional teams, and advocating for and gaining buy-in from teams to adopt ML platform and MLOps best practices.

Experience

May 2024 – Present
Senior ML Engineer — **Wolt Enterprises Oy | Remote, Germany**

- Led complex projects by coordinating project timelines and priorities with stakeholders and aligning communication and collaboration across multiple teams and different technical domains
- Worked on architecting and building an embedding framework to compute and manage embeddings on core entities that were used to improve search and personalization on the platform
- Deployed and maintained ranking models for consumer search

Jun 2020 – May 2024
Senior ML Engineer — **GoPuff (GoBrands Inc) | Remote, Germany**

- MLOps
  - Designed ML infrastructure platform to streamline and optimize ML end-to-end lifecycle.
  - Led a team and delegated tasks to develop the ML platform. Spearheaded efforts to establish MLOps best practices across the organization.
- Machine Learning Engineering
  - Set up event-based data pipelines in multiple cloud environments (GCP, Azure) to gather training data for ML models.
  - Built microservices (>5) to host multiple ML models (XGBoost, Pytorch) and deployed them to production. These ML services received high request loads of upto 400 rps and were able to serve them at low latencies < 100 ms.
  - Facilitated A/B testing of multiple models in the ML services.
  - Implemented monitoring systems to track model performances and drift detection in production environments
- Data Scientist
  - Built multiple models to improve the accuracy of the travel time predicted by the routing engine

Apr 2019 – Jun 2020
Data Scientist — **Daimler Mobility Services GmbH | Berlin, Germany**

- Built machine learning models to predict real-time road statistics such as turn costs, speeds, and personalized routing using position updates from user data. This in turn helped improve the predicted route quality and estimated travel time of the routing engine.

May 2018 – Aug 2018
Machine Learning Intern — **Uber Technologies Ltd | California, USA**

- Analyzed taxi GPS data and built a supervised learning ML model to identify cases of fraud due to GPS spoofing.

Jul 2015 – Jul 2017
Software Developer — **Zoomcar Pvt Ltd | Bangalore, India**

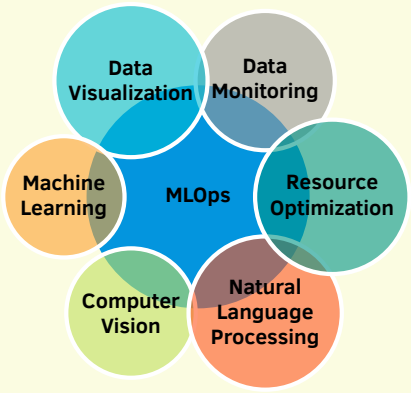
- Built and maintained the business iOS application that received over a million active monthly users. Developed new features, and handled software updates, patches, and bug fixes.

Education

Aug 2017 – Dec 2018
MSc. Computational Science & Engineering
Georgia Institute of Technology | Atlanta, USA

Aug 2011 – Aug 2016
Msc. Mathematics & BE. Manufacturing Engineering
Birla Institute of Technology and Sciences | Pilani, India

Interests



Programming Skills

Python • Java

Kubernetes • Docker • Git • GitOps

MLFlow • Seldon Core • TorchServe

Prometheus • Grafana • Datadog

C++ • Golang • Kotlin • Terraform

ArgoCD • Concourse

Languages

English (C1 - Professional Work Ability)

German (A2 - Elementary Level)

Telugu (C2 - Native Language)

Patents

Apr 2022 **Predicting ETA based on historical route data**

- Built and patented a software system that can predict estimated travel time using a historical snapshot of road statistics such as speeds, route restrictions etc.
- This system helped us generate data for training ML models to improve the travel time estimates of our routing engine.

Projects

Machine Learning
Computer Vision

Cloud detection and removal in RGB satellite data **Blog Link**

- Built a deep learning model to detect clouds in satellite imagery and accurately im-paint the scene underneath the clouds while ensuring image recency.

Machine Learning
Graphical Models

Collaborative filtering - Recommendation System **GitHub Link**

- Implemented and compared probabilistic inference based on graphical models such as the Restricted Boltzmann Machine, Deep Belief Network, Sparse Denoising, and Variational Autoencoders for recommending movies to users' preferences.

Python
ML tool

ML Project Template **GitHub Link**

- Easy-to-use tool to automate the boilerplate code for most machine learning projects.