

MUKESH KUMAR

Computer Science & Engineering

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mukeshsihag

itismks

EXPERIENCE

Python Developer | Team lead

Turing | Python, ReactJs, shell scripting, Docker, Django, Flask, AI/ML

July 2023 – Present

Remote

- Leading a team of 5-6 people to train models for executing different actions by creating short sequence tasks.
- Collected data and trained models from scratch to understand and interact with various applications.
- Automated Docker-related tasks, teaching models to download images from Docker Hub and manage containers.
- Built applications using ReactJS, Angular, JavaScript, HTML, CSS, and Bootstrap to teach models building simple frontend applications.
- Recognized for exceptional contributions to data collection and model training, resulting in a promotion to Team Lead.

Software Engineer

Eugenie.ai | Python, Django, Kafka, Mqtt, Docker, Azure, GCP, FastAPI, AWS, Kubernetes, ReactJs, Redis, Celery

June 2021 – Present

Remote

- Joined Eugenie as the founding engineer, transformed an idea into a product, and led to its acquisition by Fractal Analytics.
- I developed backend APIs with Django, implemented unit tests and utilized ORM for database queries. I also improved existing APIs by 50-60% by optimizing queries, adding indexes, and refining logic
- Developed and deployed a data streaming pipeline using Kafka, MQTT, and HAProxy which transfers lakhs of data records daily in a production environment.
- I implemented the CI/CD workflow with GitHub Actions and automated the deployment on the Kubernetes cluster.
- I developed a Flask microservice using Google Earth Engine APIs to extract real-time methane and nitrogen oxides data from satellite imagery, and this work was featured at the Google I/O event.
- I designed the architecture and created a FastAPI microservice to trigger the ML pipeline, reducing the processing time from approximately 1 minute to less than a second.
- Proficiently configured and managed the ELK (Elasticsearch, Logstash, Kibana) stack to facilitate logging and monitoring of various systems and applications.
- Successfully led the implementation of dynamic DAG generation through Apache Airflow.
- Written Python modules to insert and generate charts, tables, and data into XML files, effectively streamlining the data processing and visualization workflow.
- Built a Slack notification library that is integrated with all the services for sending alerts or errors to the Slack channel.

EDUCATION

M.Tech (CSE)

National Institute of Technology, Hamirpur

- CGPA: 9.62/10

SKILLS

C & C++

Python

JavaScript

Go

Mongodb

PostgreSQL

ReactJs

Django

Flask

ExpressJs

NodeJs

FastAPI

Kafka

Mqtt

Redis

Celery

RabbitMQ

Azure

Docker

Kubernetes

AWS

GCP

ELK

Git & GitHub

Linux

HTML

bootstrap

CSS

Data Structure & Algorithms

PUBLICATIONS

- Gupta, J., Gupta, N., Kumar, M., & Duggal, R. (2022). An Introduction to IoT-Based Posture Detection and Underlying Sensor Technology. In Smart and Secure Internet of Healthcare Things (pp. 31-48). CRC Press.

AWARDS

- 2nd prize in International IEEE Dataset Upload Contest. 100k+ samples of data is collected using esp32 sensors & Arduino Uno and submitted to the IEEE dataset contest.
- Winner of Hult Prize competition. Our idea was chosen as the best startup idea among the total 53 teams.

PROJECTS

Virtual Terminal | Python, Git

- I created a project called virtual terminal for safe experimentation with Linux commands, ensuring system stability and minimizing the risk of irreversible changes caused by incorrect command execution.