ABHIRAG RAVIKIRAN NAGPURE

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WORK EXPERIENCE

Freddie Mac McLean, VA, US
Software Developer - Financial Modeling Jun 2023 - Present

- Built a GraphQL API in Python using FastAPI, Strawberry and SQLAlchemy to connect multiple microservices, reduced latency by 60%
- Automated performance testing on pre-prod environments with Python script, saving 30+ developer minutes each deployment using Jenkins CI, Docker and Kubernetes on RedHat OCP
- Wrote a BASH CLI to evaluate pytest suite differences between two GIT SHAs, improved coverage
- Implemented vectorized regex for transaction processing and matching, improving performance by 10% in 99th percentile
- Implemented asynchronous database commit functionality, enhancing system efficiency, reducing CPU utilization across multiple K8s pods by 30% on average

Amazon Minneapolis, MN, US
Programmer Analyst Apr 2022 - Mar 2023

- Built a CI/CD service to customize freight labels, retaining $1M+ business while expanding in EU, led architecture design, implementation and monitoring using AWS
- Built RESTful APIs to connect the service to a 2-phase UI with React JS for the frontend and Java and Spring for the backend
- Wrote Spock, JUnit and Mockito unit-tests and integration-tests to reduce instances of bugs, participated in design and code reviews with senior engineers

Open Systems International Medina, MN, US
Data Analytics Engineer Nov 2021 - Apr 2022

- Reduced SQL query runtime for an IEEE KPI metrics query by 99% from 50 minutes to under 25 seconds by analyzing query plans and optimizing using custom indexing
- Led migration and conversion efforts from legacy database schema to new schema for 100M+ records, automated performance testing for SQL queries using custom UDFs with parametric queries

AlgoAnalytics Pune, MH, India
Associate Data Scientist Jun 2018 - Jun 2019

- Generated revenue of $50K, built and optimized a custom YOLOv3 object detection model to automate the detection of spray paint defects in images of manufactured parts with over 89% accuracy
- Automated synthetic data generation using Blender's Python API and GANs, reduced KL divergence between synthetic and real data by 77%, improved object detection on a subset of Cityscapes by an average of 11% IoU across 7 categories
- Led client meetings to understand requirements and modelled solution pipelines, implemented research papers, created documentation, and deployed solutions as Flask web applications

SKILLS

Scripting/Programming Languages: Python, Java, SQL, BASH (Linux), HTML, CSS, Javascript
Frameworks: ReactJS/NextJS, SpringBoot, Flask, Django, FastAPI
Tools/Platforms: MongoDB, PostgreSQL, Git, Docker, Kubernetes, Jenkins CI
Cloud: AWS (CloudFormation CDK, DynamoDB, S3, EFS, Cloudwatch, SQS, SNS, API Gateway)

EDUCATION

Indiana University Bloomington Bloomington, IN, US
MS Data Science Aug 2019 - May 2021

IIIT Bangalore Online
PGD Data Science Apr 2018 - Mar 2019

GCOE, Amravati Amravati, MH, India
BS Computer Science Aug 2014 - May 2018

CERTIFICATIONS

AWS Certified Cloud Practitioner Issued May 2021