Divya Upadhyay

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WORK EXPERIENCE

Health Innovators Inc. • **Remote** • **08/2024 – Present**

AI Engineer • **Full-time**

- Developed a chatbot using Qwen2-VL for OCR and LangChain with Gemini for interactions, successfully processing unique prescription formats and styles in minutes, generating awareness, and improving medication understanding by at least 15%.

Nissan Digital India LLP • **Thiruvananthapuram, Kerala, India** • **09/2018 - 06/2022**

Software Engineer I

- Accelerated CI/CD pipeline delivery and AWS infrastructure automation by building the **NextGen Delivery Platform**, reducing SDLC timelines from 2 weeks to 3 days using **Python, Boto3, Jenkins Job DSL Plugin, and Groovy Scripting.**
- Experience building scalable web applications using **Angular, Java Spring Boot, and MySQL**, implementing both **MVC** and **microservices** architectures with Envoy as a sidecar proxy and Istio. Applied performance optimizations, including query indexing and **Redis** caching, while ensuring security with **JWT** authentication, rate-limiting, and role-based access control.
- Prepared environments using **Ansible** to configure deployment servers (**AWS** and Physical Data Centers), installing required dependencies and setting up standard security and communication protocols, while deploying projects using **CI/CD pipelines (Bitbucket, Bamboo, Jenkins, SonarQube, and Nexus)** to ensure faster and more reliable delivery across multiple projects.
- Improved code quality by increasing code coverage to **85%** and reduced **MTTR** for security vulnerabilities by 30% using **SonarQube, JMeter, Clair Scan, and Veracode,** with faster rollbacks through database version control using **Liquibase.**
- Built and deployed cloud environments using **AWS CloudFormation (CNF)** for scalable "**Infrastructure as Code**" (IaC).
- Set up **Prometheus** for real-time monitoring of system metrics, and integrated it with **ELK** for troubleshooting.

Software Engineer Intern

- Designed a website using **React, Django, and PostgreSQL** for monitoring DevOps tools, reducing downtime by 30%.
- Supported digitizing tightly coupled legacy infra using Agile-driven SDLC and implementing CI/CD pipelines.

EDUCATION

MS in Computer and Information Sciences • University Of Florida • Gainesville • GPA: 3.90 • 08/2022 - 05/2024

B Tech In Computer Science And Engineering • Kiit University • India • GPA: 8.98 • 07/2015 – 05/2019

PROJECTS

Road Accident Analysis • 09/2023 - 11/2023

- Devised a database schema using **Oracle** to gain insights from Fatality Analysis Reporting System (FARS) datasets.
- Developed an interactive dashboard to handle and process over **1.3 million** data points, leveraging **Angular** and **Express** for the backend. Implemented advanced SQL queries for optimized data retrieval, delivering real-time insights into fatality causes.

GeoPricePredictor • 09/2023 - 12/2023

- Designed a **house price prediction ML model** focusing on the integration of intrinsic features and external data sources.
- Established a baseline performance with the **XGBoost** model, achieving an R² score of **0.7566** on **21** intrinsic features.
- Enhanced predictive accuracy for 21,613 properties across Zoom levels 16, 18, and 19 by integrating Points of Interest (POI) data with image features extracted from **Inception V3** using Transfer Learning. Achieved an **R² score of 0.9** at Zoom level 16.

Gator Taxi Ride Management • 03/2023 - 04/2023

- Engineered a sophisticated backend for a ride-sharing service using data structures like **Red-Black Trees and Min Heaps.**
- Optimized time complexities for key operations, demonstrating strong algorithmic and development skills. With these enhancements, the system managed a user surge of up to 200%, achieving a 20% reduction in average ride time allocation.

CodeLings: Converting English to Bash Scripts • 03/2023 - 04/2023

- Fine-tuned a **codet5p-220m-bimodal model** for translating **natural language to Bash commands**, implementing a **seq2seq** pipeline with custom dataset processing and achieving a **BLEU** score of **0.3939** and **precision** of **0.55**.
- Deployed on **Hugging Face** to enhance command-line accessibility for users and allow integration for developers.

SKILLS

Frontend & Backend: Angular, HTML, CSS, JavaScript**,** React**,** Java Spring Boot, Python Django, Flask, Express, Next.js

CI/CD & DevOps: Jenkins, Bitbucket, Bamboo, SonarQube, AWS, Docker, Kubernetes, Prometheus, ELK, Jira, ServiceNow

Databases: PostgreSQL, MongoDB, Oracle, Redis, Redshift

Programming Languages: Python, Java, JavaScript, Groovy, Advanced SQL, C, C++

Data Science: Pandas, NumPy, Feature Engineering, Generative AI, Transfer Learning, Large Language Models, Fine-Tuning, TensorFlow, PyTorch, sklearn, Keras, RAG, Agentic AI, Data Parallelism, NLP, CV, Neural Networks, RAPIDS API

AWARDS & VOLUNTEERING

IGSA • PR Director • University of Florida • 04/2023 - 04/2024

High Five Award • Nissan Digital India LLP • 06/2021