Abhivarma Birru

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PROFESSIONAL SUMMARY

Software Engineer with 4+ years of experience in developing scalable and high-performant web applications with enhanced user experience. Proficient in object-oriented programming, full-stack development, database management, machine learning and AI.

WORK EXPERIENCE

Software Engineer **July 2024-Present**
Neo4j - Quadrant Technologies **Redmond, WA**

- Developed a data analytics platform on Microsoft Fabric using React, TypeScript, C#, Entity Framework, and PostgreSQL, ensuring efficient data processing and engineering operations.
- Optimized backend services using multithreading and concurrent processes handling large data retrieval operations and API requests.
- Designed ETL pipelines with PySpark, handling migration of 1M+ data from relational databases into graph databases.
- Leveraged Azure OpenAI LLM to generate AI-powered graph schema recommendations, resulting in optimized database schema design.
- Reduced production incidents by 25% using webhooks on CI/CD pipelines for performing unit tests and code-vulnerability scans.

Software Engineer **December 2020 - July 2022**
Cognizant **Remote**

- Designed backend systems handling REST and GraphQL APIs using Java 17, Spring Boot and Hibernate ORM, serving 100k+ monthly client requests.
- Improved SQL server database performance and data transactions speed by 20% using data sharding and data partitioning strategies.
- Increased user experience by 40% by developing responsive and interactive cross platform web interfaces using HTML, CSS, React and JavaScript while adhering to modern front-end design principles.
- Implemented gRPC protocols and facilitated high-performance communication between microservices, reducing request latency by 15%.
- Reduced production bugs by 25% by implementing unit/integration testing using Jest and React Testing Library for UI consistency.
- Deployed containerized microservices using Docker and Kubernetes on AWS(EKS, Lambda, ECS), ensuring scalability and availability.

OTHER EXPERIENCE

Web Developer **October 2022 - May 2024**
University of North Texas **Denton, TX**

- Developed a scalable dining services platform using React and Java, handling over 10,000 daily transactions with 99.9% uptime.
- Leveraged AWS DynamoDB to store user preferences, ensuring efficient data retrieval and scalability.
- Designed 80+ sales visualizations per semester with tableau, generating data-driven insights for designing optimal meal plans.

Graduate Researcher **January 2023 - December 2023**
University of North Texas **Denton, TX**

- Designed a stock recommendation system using Neural Networks and Transformers (DistilBERT), integrating numerical stock data with textual sentiment analysis from tweets, achieving an 82% accuracy rate.
- Developed a novel approach using deep learning models and autoencoders to create location-based embeddings from census data, significantly enhancing prediction accuracy of socioeconomic indicators compared to PCA methods.

Full Stack Developer **September 2019 - November 2020**
Upwork **Remote, India**

- Designed and developed a housing management application using ReactJS, Python, GraphQL, and MongoDB.
- Accelerated service request processing by 15% through efficient middleware services and messaging services(AWS SQS).
- Implemented secure payment system, processing $20k+ monthly transactions with zero security incidents.

Application Developer **August 2018 - September 2019**
Upwork **Remote, India**

- Developed backend services for geo-informative map applications using ReactJS, Python, Flask and PostgreSQL.
- Improved scalability by 25% using Docker, Kubernetes, and SQS for streamlined microservices deployments with AWS.
- Integrated dynamic maps and real-time geospatial data, providing users with accurate information and route navigation.

EDUCATION

University of North Texas **Denton, TX**
Master of Science, Data Science - 3.9/4.0 *May 2024*

TECHNICAL SKILLS

Programming Skills: Java, JavaScript(ES6), TypeScript, Python, Spring, Django, Flask, FastAPI, NodeJS, ReactJS
Databases: MongoDB, MySQL, Microsoft SQL server, PostgreSQL, Neo4j, MongoDB, AWS DynamoDB
Tools and Software: Linux, Azure, AWS, Docker, Kubernetes, GitHub, GIT, Jenkins, Postman, Swagger, Webpack, Jest, Cypress
Functional Skills: Data Structures, Algorithms, Database Management, Operating Systems(Linux, MacOS), AI, Large Language Models