Vamsi Kumar Ganta

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Skills

Languages: Data structures & Algorithms,Low-Level-Design, Java, Python, SpringBoot, Python[Django], SQL
Technologies & Tools: AWS, EC2, DynamoDB, S3, SQS, Lambda, Athena, Elasticsearch, Spark, Hive, Presto, Kubernetes, Docker, Splunk, Kafka, Spring, Angular, ReactJS, High-Level-Design,Microservices

Work Experience

Apple, Bangalore(Client) May2021 - Present

Backend Engineer

- **Led the automation of the hiring process** end-to-end,**replacing DarwinBox** reducing HR operations, and saving **Rs 1.5M** annually.
- Implemented **Elasticsearch-based APIs** enabling efficient searches using **semantic vector models and KNN**.
- Developed an **ACL** system for managing user roles and permissions with strict access controls.
- Designed the **backbone of project**, set up backend from scratch, managing server initialization, database connections, TLS support, and dynamic request handling, while supporting asynchronous logging, raw SQL query logging and proxy configurations. The system also includes robust error handling and HTTP client management for secure and efficient operations.
- **Upgraded the entire existing backend codebase** to GHC 9.7 using Nix flakes, improving dependency management and automation, reducing development time by 20%.
- Optimize transaction success rates for various **payment gateway** by enhancing reliability & processing efficiency.
- Made the **payment page** configurable for different merchants, enabling customization based on their specific requirements.
- Built and worked on **LLM-powered AI applications** combining hybrid search (Elasticsearch + **QdrantDB**), **RAG-based chatbot** development, and real-time system monitoring.
- Implemented **Prometheus monitoring** for real-time system health tracking, ensuring scalability and stability.
- Optimized large-scale data pipelines for AI-driven search and analytics.

Kloudone, Chennai Aug 2020 - May 2021

Technology Assosciate

- Built a visualization tool to group contextually related infrastructure alerts (issues) to reduce the Mean Time to Resolution. Modeled the infrastructure dependencies as a graph problem and used graph algorithms like BFS, Union-Find to show the visualization and identify the root cause for a bunch of alerts.
- Developed a Machine Learning powered solution to predict the likelihood of a production deployment resulting in an emergency reversion.
- Python, Flask, ReactJS, Redux, Angular, d3, Kafka, DB2, scikit-learn

Education

Amrita Vishwa Vidhyapeetham Coimbatore Aug 2016 - Jun 2020
B.E. in Computer Science and Engineering ***CGPA: 7.96/10***
Relevant Coursework: Object Oriented Programming, Databases, Discrete Maths, Data Structures and Algorithms, Operating Systems, Computer Networks, Machine Learning, Data Mining, Advance Data Structures and Algorithms, Information Retrieval, Image Processing

Project Work

- **Word Lookup Dictionary (2018):** Developed a desktop software for online lookup of English words. Implemented efficient search of valid words using Trie data structure. Implemented spelling correction and auto-suggestion using edit distance algorithm. Used web scraping to get the data for online lookup. Python, BeautifulSoup.
- **Alternative-Routes in Road Networks (2019):** Applied Dijkstra's shortest path algorithm to find the route which takes the shortest time to travel from source to destination in a given road network with randomly generated traffic. Implemented methods to avoid collisions between vehicles by dynamically changing their speeds. Used C++ and OpenGL library for simulation. C++, OpenGL
- **Clustering SSH Attacks (2018):** Applied KMeans clustering algorithm to segregate different kind of attacks during a Secure Shell (SSH) session by making use of network packet files(pcap). It involved finding the best value of K and grouping the similar files on the basis of cluster assignments. Java, WEKA