Archit Pande

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EDUCATION

Georgia State University Aug. 2023 – Present
Master of Science in Computer Science GPA: 3.96/4.0

College of Engineering, Guindy, Anna University April 2021
Bachelor of Engineering in Computer Science

SKILLS

Languages, Tools and Frameworks: Java, Python, C/C++, JavaScript, Redis, Docker, Kubernetes/EKS, AWS, Elasticsearch, SpringBoot, NextJS, Kafka, Zookeeper, SQL, Shell Scripts, OpenShift, Jenkins, Git, Jira, JMS
Certifications: [Certified Kubernetes Application Developer](#), AWS Certified: [DVA-C02](#), [CLF-C02](#)
Additional Courses: CodePath: Advanced Technical Interview Prep, Summer 2024

EXPERIENCE

Software Developer: Graduate Research Assistant Aug. 2023 – Present
Georgia State University

- Responsible for designing the system architecture and deployment pipelines for generative AI/ML models to create a chatbot for people with anxiety disorders.
- Developed a scalable application with Redis as caching/vector database, MongoDB, and Kafka for messaging.
- Built REST API endpoints using Flask, utilizing [Ollama for GPU Management](#) and Docker for high-performance, containerized deployments while utilizing NextJS for the front-end.

Software Development Engineer April 2022 – July 2023
MYCOM-OSI

- Developed microservices in Java, leveraging Kafka, Elasticsearch, Docker, AWS EKS/Openshift and SQL.
- Spearheaded the low-level design and implementation of an effective solution addressing data loss issues for key performance indicators leading to a 100% reduction in data loss and improved management of network elements.
- Achieved a 10% decrease in operational costs and improved microservices deployment management by leading critical upgrades, including transitioning Elasticsearch clients from Transport to REST and updating Helm chart deployments for enhanced CI/CD management.
- Reduced ticket resolution time by 60% by managing dedicated support to clients including Airtel and Vodafone UK, resolving technical issues and bugs to ensure optimal service delivery.

Artificial Intelligence Developer Intern May 2020 – July 2020
Senuelo Advertising

- Designed and implemented an end-to-end NLG application that generates short articles on a given topic with the goal of creating relevant content to boost search rankings.
- Fine-tuned pre-trained language models (GPT-2 and CTRL) on topic-specific datasets gathered by scraping the top 100 Google search results through a custom search engine.
- Enabled content writers to save up to 4 hours/article and the MVP helped generate 120 articles.

PROJECTS

Implementation of Consistent Hashing for Distributed Cache Cluster | *Springboot, AWS, Java, Elasticache*
- Designed and implemented a distributed cache cluster leveraging AWS ElastiCache and AWS DynamoDB, integrating a customized consistent hashing algorithm in Java via the Amazon SDK for optimal load balancing across multiple nodes and AWS CDK for AWS services' deployment.

4-approximation algorithm for Zero Skew Trees | *Java, Approximation Algorithms*
- Implemented a 4-approximation algorithm to find minimum length zero skew trees for use in VLSI clock routing, where the signal from a source reaches all nodes at approximately the same time to achieve synchronization.
- The algorithm provides a zero skew tree within a factor of 4 from the optimal tree length.

Scheduling OLTP Transactions via Learned Abort Prediction | *Java, MySQL, Python, Logistic Regression*
- Implemented a logistic regression model to improve the performance of main-memory OLTP transactional systems using learned abort prediction for managing transactional aborts.
- Trained the model on the dataset containing history of pairwise transactional commits and aborts to know which transactions could potentially lead to an abort and scheduling them serially.