Nikhilesh Amarnath

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Technical Skills

Languages: Javascript, Python, Java, HTML, CSS
Frameworks: NodeJS, Fastify, React, Serverless, Spring Boot, Kubernetes, Docker, ExpressJS, Flask, Jest, PySpark, Hadoop
Databases: DocumentDB, Postgres, MySQL, MongoDB, Redis
Developer Tools: Git, Gitlab-Ci, AWS, Apache Kafka, New Relic, ELK
Cloud Tools: ECS Fargate, Lambda, SNS, SQS, Kinesis, CloudWatch

Experience

7-Eleven   Irving, Texas
Software Developer (Node JS, Fastify, AWS, MongoDB, Redis)   June 2023 - Present

- Engineered and containerized a **Promo-Engine application** for deployment on **ECS Fargate**, automating promotion evaluations using a JSON Rules Engine and adopting a microservices architecture to enhance scalability,maintainability and modularity.
- Facilitated 50+ strategic merchandise partnerships for 7-Eleven, driving over 2M in revenue from customer purchases.
- Designed and implemented an event-driven architecture for the promotion processing pipeline using **AWS SNS, SQS, and Lambda Functions** configured with the **Serverless Framework**.
- Optimized real-time promotion updates using **DocumentDB** change-streams and **AWS Kinesis**, reducing opt-in/opt-out latency by 30 percent and improving delivery efficiency across 10,000+ stores across North America.
- Integrated Application Performance Monitoring with **New Relic**, enabling real-time tracking and diagnostics to boost performance, reliability, and minimize downtime. Integrated **AWS CloudWatch** for comprehensive logging and monitoring.
- Developed and maintained **CI/CD pipelines with GitLab CI**, ensuring smooth and continuous deployments.

Intel Corporation   Hillsboro, Oregon
Software Graduate Intern (Openvino, Python)   Aug 2022 - Dec 2022

- Leveraged the Intel OpenVino toolkit to execute deep learning model inference, and conducted rigorous validation of quantization and integer calibration experiments.
- Conducted comprehensive **bench-marking** for CPU, GPU, and VPU computations.
- Created custom **python scripts to automate** the validation over 100 deep learning modules.

Open-Source Integrators (OSI)   Redlands, California
Software Engineer Intern (React, Python, Flask, Postgres, Kubernetes)   June 2022 - Dec 2022

- Performed Data Cleaning to model the Project Burn Rate, and identified correlations between different variables.
- Leveraged Predictive and Prescriptive Analysis techniques to forecast potential outcomes and recommend optimal strategies.
- Responsible for creating a responsive user interface using React to enable user input for ML models, used by project managers.
- Created dashboard in **React** to visualize the Predicted Burn Rate for a Project.
- Contributed in deploying ERP systems by creating multiple instances of Odoo application for 50+ charities using **Kubernetes**.

Academic Projects

Task Tracking Application | (React, Spring Boot, MySQL, MicroService, Kubernetes)   Feb 2024 - June 2024
- Designed and developed a Task Tracking micro-service full stack application with login, create, update, and delete tasks.
- Implemented REST APIs following MVC architecture and implemented JWT tokens for secure access to the APIs.
- Containerized the individual services using Docker and deployed it on a Kubernetes cluster with autoscaling enabled.

Real-time NER of Reddit Comments | (Pyspark, ELK, Kafka, Python)   Mar 2023 - Apr 2023
- Developed a Python application with Reddit Python SDK to stream subreddit comments and push to Kafka topic.
- Used PySpark's streaming feature to filter named entities from topic comments using spacy and push to LogStash.
- Created dashboard for visualization of the named entities in Kibana to analyze the trends in that subreddit.

Airbnb Booking System | (React, NodeJS, ExpressJS, MongoDB)   Jan 2023 - Apr 2023
- Developed a Web Application in MERN Stack that allows users to search, host, bookmark and reserve properties.
- Implemented CRUD operations in MongoDB using the Mongoose library, user authentication and REST API's in Nodejs to support ajax calls from React.

DoorDash - Database Design (MySQL, MySQL Workbench)   Jun 2021 - Dec 2021
- Developed a DoorDash application database in MySQL Workbench via reverse engineering and data requirement analysis.
- Created ER/EER model, mapped to relation schema, and normalized relations for data consistency and integrity.
- Created tables, functions, triggers and stored procedures to support the application's functionalities.

Education

The University of Texas at Dallas, Texas, US   Aug 2021 - May 2023
Masters of Science in Computer Science   *GPA: 3.71/4.0*

SRM Institute of Science and Technology, Tamil Nadu, India   Aug 2016 - May 2020
Bachelor of Technology, Computer Science and Engineering   *GPA: 7.81/10*