Manoj Kumar Sajja

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OBJECTIVE:

To work in an organization that values professional growth and a positive work culture, where I can bring my skills and energy to contribute meaningfully and grow alongside the company.

PROFESSIONAL SUMMARY:

- Strong technical foundation in **Core Java** with a deep understanding of **Object-Oriented Programming (OOP)** concepts.
- Expertise in **Microservices architecture** and **plugin-based design** for scalable and maintainable systems.
- Skilled in utilizing **AWS services** including **Lambda**, **ECS**, **S3**, **SNS**, **SQS**, and **VPC** for cloud-based solutions.
- Adept at **Client interactions**, leading requirements gathering, planning, and impact analysis, across all stages of the **Software Development Life Cycle (SDLC)**.

SKILL SET AND TOOLS USED:

- **Languages:** Core Java, Python, C, C++, Shell Script, Solidity.
- **Technologies and Database:** Spring, Rest API, XML, JSON, SQL, GenAI, Guice, DynamoDB, S3 Bucket, Postgres DB, PGSQL, Kubernetes.
- **Testing:** JUnit test cases.
- **Skill set:** OOPs Concepts, Git Version Control, AWS, Debugging, Unit Testing and Integration Testing, Performance Tuning, Requirements gathering, Agile Methodology, Scrum Methodology, Problem Solving, Data Structures, Algorithms, Interpersonal Communication, Stakeholder Collaboration, Project Management.

WORK EXPERIENCE:

Zeta, Bangalore *Feb 2024 to Present*
Software Development Engineer

- Technologies Used - *Java, Spring Boot, Kubernetes, Postgres DB*.
- Implemented an approval workflow for connector publishing and invalidation in the Financial Accounting Workbench, ensuring that connectors linking Parent and Child Chart of Accounts are reviewed and approved before publication, enhancing control and data integrity.
- I optimized system resource utilization by configuring HikariCP for connection pooling, and supporting multithreading while efficiently retrieving the Chart of Accounts tree.
- Implemented FluentD for centralized logging, improving system observability, debugging, and performance monitoring, while also contributing to API documentation and creating dashboards to track application health and ensure optimal performance.

Amazon Development Center, Bangalore *Jul 2022 to Dec 2023*
Software Development Engineer

- Technologies Used - *Java, Spring Boot, AWS, Python*.
- Worked on systems orchestrating approximately 17 million daily digital orders at Amazon, including Kindle eBooks, Amazon Music, Prime Video, and other digital products.
- Implemented a verification workflow to ensure guaranteed fulfillment and prevent customers from being charged for undelivered items, thus enhancing customer satisfaction.
- Automated tax calculation and financial record-keeping for third-party billing processes, including Google Play Billing and Apple Partner In-App Purchases, streamlining operations and ensuring accuracy.

Amazon Development Center, Bangalore *Feb 2022 to Jul 2022*
Software Development Engineer Intern

- Technologies Used - *Java, Spring Boot, AWS*.
- Designed and developed a system that triggers events based on received notifications, utilizing AWS resources like SQS, SNS, and Lambda, impacting approximately 14k orders daily and ensuring an enhanced customer experience.

National Institute of Technology, Karnataka *Jul 2021 to Aug 2021*
Research Assistant

- Technologies Used - *Blockchain, Solidity, Guanche Testing Framework*.
- Developed a smart contract to integrate blockchain technology into vehicular networks, successfully implementing blockchain to securely store and share data within the network.

PROJECTS:

State Transition Guardrails *Sept 2023 to Nov 2023*

- Implemented **guardrails** during the digital order state transition phase to ensure only valid state changes are allowed.
- Designed the guardrails to be **extensible**, supporting validation for both **Order Condition** and **Order Sub-condition** state transitions.
- **Impact:** Approximately **19M digital orders** now rely on these guardrails to ensure correct state transitions, enhancing system reliability and accuracy.

Client Controlled Kill Switch *Feb 2023 to Mar 2023*

- Developed a mechanism to **bypass payment calculation steps** during content fulfillment to prevent outages and ensure uninterrupted service to customers.
- Recognized that bypassing payment could lead to **increased bad debt** for Amazon, so a **kill switch** was designed to mitigate this risk.
- The **kill switch** allows clients (e.g., Kindle, Amazon Music, Prime) to **restrict the bypassing** behavior to their orders, isolating bad debt to their specific business while maintaining a seamless customer experience during outages.
- Triggered only in **outage scenarios**, the switch is designed to balance both **customer experience** and **business impact**.

Fulfillment Traceability *Aug 2022 to Oct 2022*

- In the **Digital Order Orchestration** system, client plugins handle order fulfillment asynchronously, limiting visibility into the fulfillment status.
- To improve observability, a **new stage** was added to the order flow to check the current fulfillment status.
- Based on the fulfillment status, the system triggers **client-configured actions**, such as: Initiating a refund if the order is not fulfilled or enforcing fulfillment if necessary to ensure the order is completed.

Music Generator Using Machine Learning Neural Network *Jan 2022 to Mar 2022*

- Developed a **machine learning model** capable of generating music autonomously, without external input.
- Used **Generative Adversarial Networks (GANs)**, a type of neural network, to create a system that functions as a "**black box**" for music generation.

Face Mask Detection *Jan 2021 to Mar 2021*

- Developed a **face mask detection model** using an artificially generated dataset with over **7000 images** (3500 positive, 3500 negative), achieving **86% accuracy**.
- Optimized the model to run efficiently on a **Single-Board Computer** (e.g., Raspberry Pi).
- Integrated the model with an **alarm system** that activates when a person is detected not wearing a mask.

TRAININGS, CERTIFICATIONS, AND ACHIEVEMENTS:

- **INNOVATION PATENT** (*Patent number: 2020104124, Issued by: Australian Government*): Low Cost Approach for Mask Detection in a Surveillance Video Based on Deep Learning Concepts.
- **English Proficiency Test**, TOEFL with a score of 102/120 overall.
- **Google Cloud Certification** for Cloud Engineer track and Data Science and Machine Learning track.
- **OtherCertification:** Data Structures, Image and Video Processing (Fundamentals) and TensorFlow, Data Science (using Python) Certification.

EDUCATION:

Bachelor of Engineering in Computer Science and Engineering, N.M.A.M. Institute of Technology, Nitte
Grade: 8.91/10 **Year of Passing:** 2022