Sabrina Chandan

Associate Vice President - Software Engineer

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Experienced software engineer with a robust background in Generative AI, vector databases, and cloud architecture (AWS). Demonstrated expertise in developing and deploying applications for financial securities trading, optimizing data storage and retrieval, and rearchitecting systems for public cloud platforms.

Professional Experience

Associate Vice President - JP Morgan Chase   *January 2020 - Present*

- **Generative AI and Large Language Models (Present):**
  - Designed and implemented solutions to calculate risk based on established risk guidelines using Generative AI and LLM techniques.
  - Utilized vector databases to store and manage embeddings efficiently.
- **Archival System Design:**
  - Architected a data archival system using Parquet files on AWS S3, providing a scalable, cost-effective solution for long-term data storage.
  - Developed optimized storage schema and retrieval strategies for efficient data access, reducing operational costs.
- **Cloud Architecture:**
  - Rearchitected existing designs to facilitate deployment on public cloud platforms, improving scalability, reliability, and cost-efficiency.
- **Custody FX (May 2021 – April 2024):**
  - Used Oracle SQL databases and distributed caching mechanisms to optimize data storage and retrieval processes, ensuring high performance and data integrity.
  - Built a comprehensive UI using Angular and backend services with Spring Boot for the Custody FX application, focused on pricing, settlement, and risk management.
  - Led the application's migration to Kubernetes, enhancing deployment speed, scalability, and resource management.
  - Integrated tools such as Soteria, Jules, Sonar, and Sandboni to modernize the application, automate functional testing, and enforce code hygiene practices.
- **Reference Data - AMS 2.0 (January 2020 – May 2021):**
  - Designed and developed AMS 2.0 with a focus on full-stack solutions, utilizing Angular and Spring Boot.
  - Implemented Spring Batch for batch processing and integrated Kafka with Lucene for enhanced search capabilities, resulting in faster data retrieval.
  - Supported BAU (Business As Usual) for legacy systems like AMSIB and CASSII.

Analyst 1- Apps Prog - BA Continuum (Bank of America)   *August 2018 - January 2020*

- **CATS (Consolidated Audit Trail) (October 2018 – January 2020):**
  - Developed frontend and backend components to retrieve and display data from various source systems using MongoDB.
  - Built microservices in Scala with Spring Boot for data integration, ensuring compatibility with multiple data sources and enhancing audit capabilities.
- **Mercury Vantage (August 2018 – October 2018):**
  - Developed complex Scala logic for real-time data transformation, updating trade data every 8 seconds for the Mercury Vantage system.
  - Utilized Akka and Play frameworks for real-time data streaming, improving responsiveness for traders and analysts.
- **Chart Data Visualization:**
  - Built a data visualization solution with ChartIQ, incorporating data sampling logic to improve chart performance and usability.
  - Developed backend services in Scala and frontend components in Angular to provide a seamless user experience.

Associate Technical Analyst 2 -Oracle Financial Services Software   *August 2014 - August 2018*

- **Oracle Banking Digital Experience (OBDX) (January 2016 – August 2018):**
  - Participated in product releases (16.1 to 18.2) as a full-stack developer, working on modules like bill payments and loans, implementing complex business logic and exception handling.
  - Designed and implemented REST APIs to support multiple business functions, and configured product installations, including OHS, OAM, and OpenLdap for authentication.
  - Applied design patterns like Singleton and Factory to enhance code maintainability and efficiency.
- **Flexcube Direct Banking (FCDB) (August 2014 – December 2016):**
  - Developed Internet and Mobile Banking modules, serving both retail and corporate users. Managed end-to-end design, development, and production issue resolution.
  - Analyzed and implemented customizations based on client requirements, and contributed to the FCDB 12.0.3 release.
  - Provided production support, ensuring system stability and seamless client operations.

Additional Projects

Hackathon 2024 - Prodiagnosticator:
- Led a project focused on logs analysis, creating patterns to identify issues and predict behaviors based on existing logs data.
- Enhanced the capability to analyze application logs for better insight into application behavior, enabling predictive diagnostics and proactive troubleshooting.

Confluence Query Wizard (Chatbot using Retrieval-Augmented Generation and LLM)
- Developed a chatbot leveraging Retrieval-Augmented Generation (RAG) and large language models (LLMs) to interact with Confluence documents.
- Designed the bot to process and retrieve information from Confluence, enabling seamless document navigation and query responses for improved productivity and information access.

Kubernetes Dashboard Enhancement – Code Week, JP Morgan Chase (Thunderstorm Project):
- Built an enhanced Kubernetes Dashboard to visualize metrics and manage operations with bank-specific authentication and authorization layers.
- Created a streamlined interface for developers and SREs, allowing real-time monitoring and management of applications within a single dashboard.

Text Summarization and Categorization (Natural Language Processing Project):
- Implemented a tool for text summarization and categorization using natural language processing (NLP) techniques in Python.
- Developed an optimized algorithm for efficient processing and extended the project to a user interface for improved accessibility.

Education

Bachelor of Engineering in Computer Science - Mumbai University   May 2010 - May 2014
Score: 72% with Distinction

Key Skills

- **Programming Languages:** Python, Java, Scala,
- **SQL Databases:** Oracle SQL, Vector Databases, MongoDB
- **Cloud Platforms:** AWS, Azure, AWS S3,
- **Tools & Technologies:** Generative AI frameworks, LLMs, Distributed caching systems, Parquet files, ChartIQ, Spring Boot, Angular 5, Kafka, AMPS,
- **Development Practices:** Agile methodologies, CI/CD, Microservices architecture

Certifications

- **AWS Solution Architect (AWS SAA)**
- **Kubernetes Application Developer (CKAD)**