PRANAV AGRAWAL

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PROFESSIONAL SUMMARY

Software Development Engineer with 4 years of experience in Java 8, Spring boot, web application development, SQL, and agile development methodologies. Skilled in developing high-performance APIs, distributed systems, and scalable microservices. Demonstrated strong problem-solving, critical thinking, communication skills, and collaboration with other team members.

EDUCATION

Master of Science in Computer Science / *GPA: 3.8/4.0*   May 2024
George Mason University   *Fairfax, Virginia*

Bachelor of Technology in Computer Science and Engineering / *GPA: 8.5/10.0*   May 2018
Graphic Era University   *Dehradun, India*

TECHNICAL SKILLS

Course Work: Object Oriented Programming, Algorithms, Database Systems, User Design, Information Security, AIML
Programming Languages: Java, Python, JavaScript
Tools & Frameworks: Git, Docker, Kubernetes, Rancher, Spring framework, Spring Boot, JPA, Hibernate, JUnit, Angular
Web Technologies & Services: HTML, CSS, XML, JSON, REST API
Database Management: SQL Server, MySQL, Oracle 11g, MongoDB (NoSQL)
Cloud Infrastructure: AWS (IAM, VPC, EC2, RDS, DynamoDB, ECS, EKS, CloudFormation, CloudWatch)

PROFESSIONAL EXPERIENCE

Accenture Solutions Pvt. Ltd.   May 2021 – July 2022
Application Development Senior Analyst   *Bangalore, India*

- Developed a HIPAA-compliant SaaS web application using **Java & Spring Boot microservices**, streamlined healthcare logistics and developed real-time events tracking using geolocation to track over **350 events per second**.
- Implemented **Kafka message broker** service for seamless **asynchronous communication** between Java enterprise platforms. Used **Redis** database for caching user session tokens generated using **JWT** for authentication & session management.
- Implemented **Hibernate** ORM for data persistence to **MS SQL**, resulting in achieving an increase in efficient database transaction and making the system more scalable. Implemented **Spring Transaction Management** for strongly consistent updates.
- Managed application deployments (DevOps) on **Kubernetes**, skillfully **debugged** and resolved issues related to **Jenkins** build process and **docker images**, ensuring **high availability** of the application.

Wipro Limited   Nov 2018 – May 2021
Project Engineer   *Bangalore, India*

- Designed **Java APIs** for integrating application with **BillDesk** payment system & used **Angular** framework which enabled users to conveniently purchase insurance, enhancing user experience and **120000 USD** revenue generation.
- Logged events in **Elasticsearch** by writing **Java REST APIs** to construct the breadcrumb of events occurred during a transaction, and to facilitate **cross-platform** real-time communication between application and servers.
- Demonstrated strong sense of ownership and accountability through shipping production quality code, equipped with **testing** using **Junit** and **Mockito** frameworks, **monitoring** using **spring actuator** & **Kibana** and **documentation using Swagger API**.
- Led a team of 4 members, provided product **knowledge transfer** and guidance while assigning tasks to respective team members, ultimately enhancing the team's productivity, and driving success.

RESEARCH EXPERIENCE

George Mason University   May 2023 – May 2024
Graduate Research Assistant   *Fairfax, Virginia*

- Developed **python** code utilizing Lighthouse beacon node APIs to capture **Ethereum consensus client** attestation rewards data.
- Optimized **API** requests in parallel batches asynchronously for efficient data extraction, including logs and ERC20 token details. Implemented **MongoDB (NoSQL)** for **scalable** transactional data management.
- Engineered features using Ratcliff-Obershelp distance and Spearman correlation to identify **similarities** among consensus clients. Developed a robust **AIML classifier model** to enhance decentralization and reducing single points of failure.

TECHNICAL PROJECT EXPERIENCE

Survey Application / Code / Video /

- Designed **RESTful APIs** in **Java & Spring Boot microservices**, utilizing JPA and **Amazon Relational Database Service (RDS)** for survey data collection and created a user-friendly interface using **Angular.**
- Developed a **monitoring framework** to track performance metrics, **log** critical events using **Spring Actuator, Prometheus, and Grafana** open-source frameworks. Regularly updated comprehensive security and compliance measures using **SonarQube**.
- Established a **CI/CD** pipeline that includes a Git source code repository at **GitHub**, and **Jenkins** for automated build and deployment of the application on **Kubernetes**. Integrated **CloudFormation** to automate the provisioning of **backup environments**.

CERTIFICATION

AWS Certified Solutions Architect – Associate @Verify