

VIDHYA RAVI

Software Development Engineer

📍 SEATTLE, WA

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SUMMARY

Experienced Software Development Engineer (SDE) with a proven track record of designing, developing and supporting database-driven web applications, server-side frameworks and highly available distributed systems at scale. Skilled in Java and Python, with expertise in cloud computing and agile methodologies. Known for effective communication and a collaborative team player, committed to ongoing growth and consistently delivering top-tier outcomes.

EXPERIENCE

Software Development Engineer / Amazon – AWS Fintech / Seattle, WA

July 2022 – Jan 2023

- Designed and developed a web application called REVA that supports Amazon's internal stakeholders in monitoring the company's progress toward achieving the goal of 100% renewable energy by 2030. It is developed using Amazon AWS services like **Lambda, S3, DynamoDB, IAM, API Gateway**.
- Developed a robust **CI/CD** pipeline using **Ruby on Rails** within the AWS Cloud Development Kit (CDK) framework, enhancing automation and deployment processes for efficient and scalable cloud-based applications.
- Implemented a **personalized recommendation engine** for an e-commerce platform. Deployed on AWS infrastructure, incorporating Apache Spark for big data processing. Collaborated with data scientists to refine models, resulting in enhanced customer engagement and sales conversion rates.
- Designed and developed a dedicated UI page, using **Vue, .NET, HTML and CSS** enabling customers to effortlessly access project valuations, cash flows, and portfolios in their local currency, enhancing user experience and engagement.
- Developed and optimized advanced **SQL queries** for complex data analysis and manipulation, significantly improving data access and actionable insights for business decision-making.
- Engineered a user-friendly interface utilizing the **Polaris framework (ReactJS, HTML and CSS)** and utilized **Babel** for JavaScript to ensure cross-browser compatibility to display currency view reports with toggle options, ensuring seamless integration with backend **REST services** for optimal functionality and usability.
- Implemented metrics for REVA in AWS services using **Java**, helping developers in logging and monitoring performance metrics effectively.
- Developed web applications using **Python Flask framework**, leveraging its lightweight and flexible nature to create scalable and robust solutions.
- Developed and implemented a module to streamline data transfer between **S3 and DynamoDB** across multiple AWS accounts leveraging AWS Lambda which also improved developer efficiency.
- Enhanced the model algorithm in REVA, aligning near-term and long-term forecasts with future costs using **Python Boto3, Lambda, and ReactJS** components for accurate planning cycle changes and optimize revenue metrics.
- Partnered with internal stakeholders for **gathering business requirements**, that aided in a smooth roll-out of the features.
- Deployed services using **AWS CloudFormation Stacks**, actively monitoring metric alarms and debugging service logs with CloudWatch, in addition to providing on-call support for operational tasks.
- Maintained **Elasticsearch** indices and queries to support real-time search and analytics functionality, contributing to the improvement of search performance.
- Implemented secure coding practices aligned with **OWASP** guidelines and executed unit tests using **test-driven development (TDD)** practices to ensure code quality and early detection of defects.
- Proven ability to take **ownership** of projects and provide direction, collaborating effectively with colleagues at different levels of expertise. Exhibited leadership qualities in guiding project teams towards successful outcomes and delivering projects within established timelines.
- Actively participated in Hackathon and hacked a solution to **automate local testing** of websites like DataStudio and REVA thereby reducing deployment time from 30 minutes to minutes. This helped developers to leverage local backup data for testing instead of production data.
- Onboarded a new hire at Amazon in acclimating to internal tools and achieving a comprehensive grasp of the application.

Tech Stack: Python, AWS, XML, ReactJS, .NET, Ruby on Rails, AngularJS, Big Data AWS, Apache, JavaScript, CSS, HTML.

Software Development Engineer | Amazon | Seattle, WA

Jan 2023 – present

- Designed and implemented a permission model (**AuthN and AuthZ**) to retrieve the **LDAP groups** for the AMPS web application, supporting AWS Marketing and WWPS, utilizing **AWS Brass, API Gateway, and Neptune GraphQL Database**. This model enables users to manage (CRUD) budgets across all Amazon organizations.
- Implemented a role module in the frontend with **Node.js** to manage all CRUD operations through Permission model APIs integrated into the backend.
- Implemented a message queuing system called AWS FinBI Conversations using **RabbitMQ** to facilitate asynchronous communication through **Promises** between microservices, ensuring efficient and reliable message delivery in **Distributed systems**.
- Proficient in using **AWS/CDK (Typescript)** for implementation of IAM roles, related functions and adding related policies for granting cross-account access among two different AWS accounts.
- Utilized PHP and MVC frameworks for robust back-end development of the application, and deployed using **Docker**, and maintained version control and collaborative coding with Git.
- Collaborated effectively with stakeholders to **conduct design reviews** and demos, contributing to the integration of new features and enhancements for internal AWS Finance users.
- Developed test specs and implemented unit and integration tests utilizing **JUnit and Mockito** within an Agile framework.
- Proficient in utilizing Version Control Git and **CI/CD pipelines** for Code Management, actively engaging in Peer Code Reviews.
- Proficient in configuring and managing Apache web servers to efficiently serve web applications and static content, ensuring high availability and optimal performance in diverse environments.
- Developed critical functionalities within **Docker**, utilizing the **Go** programming language to architect core components like the **Docker Engine** and **Docker CLI**. Through this project, I contributed to enhancing Docker's capabilities, enabling efficient container management and deployment across diverse computing environments.
- Showcased adept **problem-solving** abilities with adept project management skills and managed projects effectively with **JIRA**, leading to enhanced user experience and operational efficiency.

Tech Stack: Java, AWS, XML, ReactJS, AngularJS, RabbitMQ, Ruby on Rails, Docker, Kubernetes, Go, NodeJS, AWS, CSS, Figma.

Software Engineer / PNC Bank - Accenture / India

May 2019 – Jan 2021

- Developed and maintained a PNC banking application to manage account details and performs financial transactions for the customers. It was developed using **C++, JavaScript, HTML, CSS, and SQL**, which ensured secure authentication and authorization with Spring Security.
- Expertly managed **Microsoft SQL Server** development, crafting complex DDL scripts, stored procedures, functions, and triggers to optimize database performance. Integrated databases seamlessly with applications using ADO.NET, ensuring efficient data access and manipulation.
- Collaborated with cross-functional teams to provide **Kafka** expertise, to contribute adoption of event-driven architectures that allowed for flexibility, decoupling, and scalability in application.

- Developed and implemented a robust **payment gateways** and processing systems, utilizing Stripe, to facilitate secure and efficient online transactions.
- Implemented and optimized MapReduce alqorithms within **Hadoop** framework to process large-scale datasets, resulting in significant improvements in data processing efficiency and reduced computational overhead.
- Engaged in all phases of the Software Development Life Cycle (SDLC), including requirement gathering, analysis, design, and code development. Designed and implemented the backend framework using **Spring Boot and Java**.
- Demonstrated proficiency in utilizing serverless platforms such as **Azure and Google Cloud** to develop and deploy scalable applications, optimizing resource utilization and enhancing performance.
- Executed automated test cases using TestNG and Cucumber framework, collaborating with QA and technical product management teams to fortify system reliability
- Expert in Mainframe testing, ETL job, API testing and Web based applications.
- Created and managed SQL Server databases, tables, views, stored procedures, and backups using SQL Server Management Studio.
- Established a CI/CD pipeline using **Groovy** and **Jenkins**, deploying applications into Kubernetes for high-quality software delivery.
- Worked closely with sales teams and customers to enhance applications according to user needs.

Tech Stack: C++, Java, Kotlin, SpringBoot, XML, ReactJS, AngularJS, NodeJs, MySQL, TestNG, Cucumeber, HTML, CSS, Azure, Kafka, Google Cloud

Graduate Teaching Assistant / University of Houston Clear Lake / Houston, TX **Jan 2021 - May 2022**

- Delivered an Object-Oriented Programming class in Java for 40 students and provided personalized support for assignments, debugging, and deployment using Putty.
- Elevated class performance by 25% by helping in management of complex Java assignments.
- Optimized administrative and educational processes, encompassing grading, proctoring, and collaboration with professors to deliver targeted instruction, thereby enhancing course efficiency.

SKILL SET

Languages	Python, JavaScript, Java, C++, C.
Web Technologies	HTML5, CSS, JavaScript, HTTP, XML, JSON, Angular JS, React JS.
Tools and Frameworks	AWS , REST API, Microservices, Django, Flask, REST, Docker, JIRA, GitLab, Linux, JUnit, Spring, lambda functions, Spring Boot, Microsoft Azure, React JS
Databases	MySQL, PostgreSQL, NoSQL.
Build/Deployment Tools	Docker, Jenkins, Tomcat, Git/GitHub, Kafka.
AWS	IAM, S3, DynamoDB, Elastic Beanstalk, ELB, RDS, Route53, Cloud Watch, Cloud Formation, EC2.

EDUCATION

University of Houston Clear Lake / Houston, TX	Jan 2021 - May 2022
Masters in Computer Engineering	GPA: 3.9/4.0