

Sai Prasad Paladugu

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Professional summary

Software Engineer with over 4.5 years of experience specializing in cloud-native architecture and full-stack development. Delivered significant performance and cost optimizations, including a 100x reduction in DynamoDB costs at Amazon. Expert in designing scalable microservices and data-intensive workflows using AWS, Java (Spring Boot), and modern DevOps practices to solve complex business challenges.

Technical Proficiencies:

- **Languages:** Java (8/11/17), C, C++, C#, Python, SQL, Bash, Kotlin
- **Frontend / Web Technologies:** React.js, Angular, AngularJS, TypeScript, JavaScript, HTML5, CSS3, Bootstrap
- **Backend / Frameworks:** Spring Boot, Spring MVC, Hibernate, Apache Camel, Apache Kafka, Django, Express.js, .NET
- **Cloud & Infrastructure:** AWS (EC2, Lambda, S3, API Gateway, Step Functions, DynamoDB, RDS, SQS, SNS, CloudFormation, CloudWatch, CDK, EMR, Redshift, Athena, Kinesis, EKS, ECS, Neptune, App Config), Microsoft Azure, PCF
- **Databases / Data Stores:** PostgreSQL, MySQL, Oracle, SQL Server, MongoDB, Redis, DynamoDB, Neptune, Snowflake
- **DevOps & CI/CD:** GitLab CI/CD, Jenkins, Docker, Kubernetes, Terraform, Ansible, Bamboo, Git, Bitbucket, Maven, ANT
- **Messaging / Streaming Systems:** Kafka, RabbitMQ, ActiveMQ, Amazon SQS
- **API & Integration:** REST, GraphQL, SOAP, OpenAPI, Swagger
- **Testing / Automation Tools:** JUnit, Appium, Postman, Cucumber, Selenium, Cypress
- **Data & Visualization:** Tableau, Pandas, R

Employment history

Amazon - Software Engineer

October 2022 - Present

Dallas, TX

- Reduced DynamoDB read capacity costs by **100x** and improved query latency by **65%** by redesigning data access patterns for global customer data.
- Engineered high-throughput financial workflows using **Java + Spring Boot**, exposing **GraphQL APIs** for optimized client-side data fetching.
- Designed and implemented a **RESTful API** endpoint using **AWS API Gateway** and **Lambda** to support **AWS Step Functions** based workflows, enabling single-line infrastructure upgrades with 100% test coverage.
- Introduced **Redis-based caching layer via ElastiCache**, resulting in a **70% boost in response times** for immigration systems.
- Built a **microservice for network device modeling** using **Neptune (graph DB)**, improving query speed by **95%** and enabling infinite scalability with AWS Lambda.
- Spearheaded a critical, cross-team data integrity initiative by improving API schemas, purging malformed datasets, and migrating over 5 years of historical data to cold storage.
- Automated infrastructure provisioning with **AWS CDK** and implemented comprehensive **CloudWatch** monitoring and alerting, reducing time-to-detection for production issues by **80%**.

- Involved in designing and deploying multi-tier immigration and relocation services using all the AWS services like (EC2, Route53, S3, RDS, Dynamo DB, SNS, SQS, DLQ, IAM) focusing on high-availability, fault tolerance, and auto-scaling in AWS Cloud Formation.
- Built a real-time case tracking dashboard using **Angular**, integrating GraphQL and REST APIs, enabling internal teams to visualize over **50k+ active Immigration & relocation cases** globally.
- Designed, deployed, and maintained end-to-end Spark-based ETL pipelines on **AWS EMR** and Airflow to process **terabyte-scale** datasets for weekly refreshes.
- Mentored multiple new team members and interns, accelerating their onboarding and helping them deliver successful projects ahead of schedule.

Prakya - Software Engineer

May 2022 - Aug 2022

Remote

- Built and maintained Jenkins CI/CD pipelines for automating build, test, and deployment cycles.
- Boosted developer productivity by 40% by building Bash/Python utilities for automating Docker builds, GitLab CI/CD workflows, and cleanup tasks.
- Created and maintained Jenkins pipelines for automated testing and deployment, accelerating release cycles by **3x**.
- Wrote **BDD tests using Cucumber** and maintained **JUnit** unit test suites, achieving **85%+ code coverage**.
- Participated in Agile ceremonies and consistently completed stories ahead of schedule.

Legato Health Technologies - Software Engineer

Mar 2020 - Aug 2021

Bangalore, India

- Developed scalable backend services using **Spring Boot and Java 11**, handling sensitive health data for **100K+ users**.
- Migrated legacy systems from **.NET/WPF** to modern REST APIs and microservices, improving system maintainability by **60%**.
- Built robust ETL pipelines and dashboards using **Python (Pandas)** and **Tableau**, delivering leadership insights across **850+ employees**.
- Deployed applications on **Kubernetes and PCF**, implementing blue-green deployments and autoscaling policies.
- Automated weekly reports and internal dashboards using **R and Python**, cutting manual effort by **90%**.
- Collaborated on full stack features using **AngularJS, ReactJS, Node.js, JSON, HTML5, CSS3**, and ensured accessibility using **JAWS and NVDA**.
- Designed and executed **automated test suites** for regression and functional testing, enhancing release reliability and coverage.

Education & Skills

Master of Science in Computer Science, Dec 2022

University of North Texas