

SAI PRANITH PATIBANDLA

Atlanta, Georgia | +1 (404) 729 2160 | patibandlasaipranithgsu@gmail.com | LinkedIn: [saipranithpatibandla](#) | [Portfolio](#)

SUMMARY

Innovative **Full Stack Developer** with **3+ years** of experience building high-impact, scalable solutions that drive efficiency and innovation. Proven ability to enhance system performance by 30-45% through automation, cloud optimization, and performance engineering. **2x AWS & Azure Certified**, thrives in fast-paced, high-growth environments, solving complex challenges and delivering seamless, customer-focused experiences at scale.

EDUCATION

Georgia State University

Masters in Computer Science (GPA: 3.93/4.0)

Atlanta, Georgia

August 2023 – April 2025

- Coursework: Software Engineering, **Human-Computer Interaction**, Cryptography, **Web Programming**, Data Security.

Jawaharlal Nehru Technological University

Bachelors in Information Technology (GPA: 9.2/10)

Hyderabad, India

July 2017 – July 2021

- Coursework: **Data Structures**, **Object Oriented Programming through Java**, Design and Analysis of Algorithms, Software Engineering, **Design Patterns**, Operating Systems, Scripting languages, **Object Oriented Design**, Database Management Systems, **Software Development**.

WORK EXPERIENCE

EdLight

Full Stack Software Engineer - Contract

Atlanta, Georgia

August 2024 – Present

- Led development of **scalable, automated enterprise education platform** as a responsive **Single Page Application (SPA)** using **React.js**, **Yarn**, **HTML5**, **CSS3**, **TypeScript** frontend and **Python**, **Django REST API** backend, boosting student engagement by **35%** and supporting **10K+** concurrent users.
- Architected error boundary components to gracefully handle **React rendering** failures, implementing performance optimizations with essential **React hooks** that reduced page load time by **40%** and enhanced debugging efficiency by **60%** through detailed error capture and reporting.
- Engineered data synchronization solution with custom conflict resolution algorithm that reduced data loss by **95%** while implementing event-driven architecture using **AWS Lambda** and **SQS** that improved throughput by **3x** during peak usage periods.
- Optimized database performance by migrating from **PostgreSQL** to **AWS RDS Aurora**, implementing **connection pooling & query tuning**, improving **query performance** by **40%**. Developed **Linux-based shell scripts** to automate database monitoring and maintenance tasks.
- Established **CI/CD** pipeline with **CodePipeline** and **CodeBuild**, maintaining **90%+ test coverage** with **Jest** and **Pytest**, reducing production bugs by **45%**. Integrated **Git** for version control and utilized **JIRA** for **Agile** sprint planning and issue tracking.

Georgia Department of Public Health - GSU

Graduate Assistant Software Engineer

Atlanta, Georgia

August 2023 – Present

- Transformed **healthcare data assesment system**, reducing turnaround time from **5 days** to **24 hours (80% faster)** using **React.js**, **NPM**, **HTML5**, **CSS3**, and **JavaScript** frontend with **Java**, **Spring Boot** microservices, enabling real-time public health decision-making during emergencies.
- Built event-driven microservices architecture with **Apache Kafka** that streamlined communication between systems, cutting data integration errors by **60%** and enabling seamless processing of **1,000+** health records daily for **10K+** Georgia residents.
- Designed **HIPAA-compliant** data architecture using **AWS RDS Aurora PostgreSQL** and implemented secure **RESTful APIs** using **Postman** and **Swagger**. Optimized **SQL** schemas, indexing and stored procedures, improving database performance by **30%** while ensuring regulatory compliance.
- Established resilient **AWS** infrastructure with **EC2** and **S3** that maintained **99.9% uptime** during public health emergencies. Reduced incident resolution time by **45%** through custom **CloudWatch** monitoring dashboards and **SES** alerting.
- Accelerated development cycles by **65%** using **Git** for version control, **Maven** for dependency management and **Agile JIRA sprints** for team coordination. Implemented test-driven development with **JUnit** and **Jest**, achieving **85%** code coverage and reducing critical bugs by **70%** in production.

Development Bank of Singapore

Full Stack Developer

Hyderabad, India

August 2021 - July 2023

- Boosted operational efficiency by **40%** by architecting a custom **declarative framework** for a financial web application, automating **demand draft & foreign cheque payments** with **99.9% accuracy**. Reduced new payment flow development time by **60%**, enabling faster regulatory compliance.
- Designed and built responsive front-end **Angular 13** interfaces with **TypeScript**, **HTML5**, **CSS**, integrating with **Java**, **Spring Boot**, and **Spring Batch microservices** using **Swagger** and **REST APIs**. Leveraged **Apache Kafka** to handle **\$10M+** daily transactions asynchronously.
- Automated **SWIFT payment processing**, replacing **manual approvals** with an end-to-end **cross-border** transaction & **card** settlement system, reducing processing time by **50%**. Implemented comprehensive **unit** and **integration** tests using **Jasmine** and **JUnit** frameworks, achieving **90%** code coverage.
- Implemented **Angular lazy-loading** & **NgRx** state management while building secure **Spring Security services** with **JWT authentication**, **Dependency Injection**, **Custom Annotations**, and **Spring Data JPA** repositories.
- Accelerated release cycles by **3x** by implementing comprehensive **CI/CD** practices using **Jenkins**, **Git**, **Bitbucket** for version control, and **Maven** for build automation. Led a **6+ engineer team** in **2-week Agile sprints**, improving team velocity by **35%** while maintaining high-quality deliverables.
- Integrated with legacy systems through **RabbitMQ**, **Websphere MQ**, and **JBoss EAP** while crafting custom **Linux Shell Scripts** for system monitoring and maintenance. Maintained **99.9% system uptime** while ensuring seamless business-technical alignment through **JIRA & Confluence**.

CSIR-Indian Institute of Chemical Technology

Software Engineer Intern

Hyderabad, India

January 2020 – January 2021

- Developed a **high-performance scientific computation platform**, improving **chemical equation accuracy** by **45%**, optimizing **data processing and workload distribution** across computing resources. Integrated **Azure cloud services** for scalable data storage and real-time analytics.
- Built a **job scheduling & resource management** system in **C++**, **C#**, **.NET**, balancing **CPU-intensive workloads** and reducing data retrieval time by **35%** with **custom indexing & search algorithms**. Implemented **unit testing** with **NUnit**, improving system reliability and debugging efficiency.
- Designed intuitive **research interfaces** using **TypeScript**, **HTML**, **CSS**, **Angular**, and **RESTful APIs**, enabling real-time visualization of complex chemical data and increasing processing throughput by **40%**. Leveraged **Azure DevOps** for version control and **CI/CD** automation.
- Streamlined workflows using **MySQL**, **Linux**, **Shell Scripting**, **Git**, **JIRA**, and **Confluence**, ensuring **efficient data processing**, **automated documentation**, and seamless knowledge transfer across research teams.

PROJECTS

- AI-Powered Intelligent Inventory Management System | Master's Project

October 2024 – Present

 - Crafting a microservices-based inventory platform using **React.JS**, **Java Spring Boot**, and **AWS services** (Lambda, DynamoDB, S3) that optimized retail inventory management. Implemented a scalable architecture with **automated testing** through **PyTest** that achieved **90% code coverage** and reduced development cycles by 35%.
 - Integrated predictive analytics using **GenAI (Prompt Engineering with OpenAI GPT)** models to forecast inventory needs and generate intelligent product recommendations, resulting in **30% improvement** in inventory accuracy and enhanced customer experience. Established **CI/CD** pipeline with **AWS CodePipeline** to automate deployment and testing, enabling rapid iteration and feature deployment.

- Hand Gesture Recognition and Voice Conversion for Deaf and Dumb

April 2022 – July 2022

 - Pioneered a real-time sign language recognition system using **Python**, **OpenCV**, **LSTM**, and **CNN** architectures that achieved **85% accuracy** in translating gestures to speech. Optimized the deep learning model through rigorous experimentation with **TensorFlow**, **PyTorch**, and **Keras**, while leveraging **NumPy**, **Pandas**, and **Scikit-learn** for robust data preprocessing and feature engineering. Published research findings in the *Journal of Positive School Psychology*, demonstrating the practical application of computer vision and DL technologies to enhance communication accessibility for hearing-impaired users.

LEADERSHIP EXPERIENCE

- Indian Student Organization | Georgia State University

Atlanta, Georgia

Vice President

August 2023 – July 2024

 - Orchestrated **cross-functional teams** to execute **15+** high-impact cultural and professional events for **500+ students**, demonstrating **customer obsession** by driving **30%** higher attendance through targeted improvements. Established a structured mentorship program linking **40+** international students with industry professionals, boosting technical interview success rates.
 - Administered an **internship pipeline** that helped **12 students** land technical roles, leveraging alumni networks to maximize impact on a minimal budget. Expanded organization membership by **42%** through strategic outreach and implemented data-driven tracking systems to optimize future initiatives.

CERTIFICATIONS

- AWS Certified Developer - Associate | Amazon Web Services

February 2025 - February 2028

 - Demonstrated thorough expertise in developing and deploying cloud-based applications using core AWS services including **EC2**, **S3**, **DynamoDB**, **Lambda**, **API Gateway**, and **CloudFormation**. Validated proficiency in implementing AWS security best practices, serverless architectures, and designing highly available, scalable systems that align with AWS Well-Architected Framework principles.
- AWS Certified Solutions Architect - Associate | Amazon Web Services

February 2025 - February 2028

 - Pioneered complex architectural frameworks for optimal AWS solutions that balance business requirements with technical constraints, showcasing advanced proficiency in designing highly available, fault-tolerant, and cost-effective distributed systems. Mastered complex AWS infrastructure components including **VPC** networking, **Aurora** database clusters, **ECS** container orchestration, and **CloudWatch** monitoring systems.
- Microsoft Certified Azure Developer – Associate | Microsoft Azure

March 2025 - March 2026

 - Established proficiency in constructing cloud and edge computing solutions using Microsoft Azure services, including **Azure App Service**, **Azure Functions**, **Cosmos DB**, and **Azure Storage**. Engineered robust authentication mechanisms, authorization frameworks, and secured cloud solutions while architecting scalable applications that harness containers, API Management, and serverless computing to deliver high-performance cloud-native applications.

ACHIEVEMENTS

- Star Performer | Development Bank of Singapore

April 2023

 - Applauded for architecting an application capable of seamlessly managing demand draft and foreign check payments.
- Super Techie | Development Bank of Singapore

August 2022

 - Recognized for ingeniously redesigning credit card payments and NEFT funds return process with exceptional technical prowess.
- Super Rookie | Development Bank of Singapore

March 2022

 - Honored for pioneering SWIFT payment automation in cross-border transactions.

SKILLS

- Programming & Development:** Java, Python, Django, C, C++, C#, .NET, JavaScript, TypeScript, React.js, Angular, HTML5, CSS, Jest, Junit, Spring Boot, Spring MVC, RESTful APIs, Object-Oriented Design, Data Structures, Algorithms, Multithreading, Full-Stack Development, System Design, Debugging, Troubleshooting.
- Cloud & Infrastructure:** AWS (EC2, S3, Lambda, Aurora, CloudWatch, ECS, SQS), Docker, CI/CD (Jenkins, GitHub Actions), Kubernetes (basic), Distributed Systems, Kafka, Message Queuing, Fault-Tolerant Design, Scalability, Performance Engineering, Resource Management, Job Scheduling, Linux, Shell Scripting.
- Database & Tools:** SQL, MySQL, PostgreSQL, NoSQL (DynamoDB, MongoDB), Database Design, Git, GitHub, JIRA, Confluence, Agile/Scrum, IntelliJ IDE, VS Code, Postman, Swagger, SDLC, DevOps, Data Visualization, UML Diagrams, Technical Documentation.
- Professional Skills:** Problem-Solving, Leadership, Communication, Collaboration, Adaptability, Time Management, Critical Thinking, Teamwork, Customer Obsession, Handling Ambiguity, Cross-Disciplinary Collaboration, Code Reviews, Requirements Analysis.