

# Madhu Sudhan Reddy Konda

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## EDUCATION

- **Georgia State University** Atlanta, GA, USA  
Master's, Computer Science  
*Master's, Computer Science*
- **National Institute of Technology Tiruchirappalli** Tiruchirappalli, India  
Bachelor's, Computer Science; GPA: 3.8  
*Bachelor's, Computer Science; GPA: 3.8*

## SKILLS SUMMARY

- **Programming Languages:** Python, Java, C#, C/C++, JavaScript, TypeScript, .NET
- **Frontend Development:** React, Redux, HTML/CSS, jQuery
- **Backend & Distributed Systems:** REST APIs, Microservices, Spring Boot, Node.js (Express), Distributed Systems
- **Cloud & DevOps:** AWS (SQS, SNS, S3, CloudWatch, Lambda, RDS), Azure, Docker, Kubernetes, Jenkins, CI/CD
- **Databases & Data:** PostgreSQL, MySQL, MongoDB, DynamoDB, SQL, Oracle
- **Development Tools:** Git, JIRA, Postman, Visual Studio, GitHub Actions, Jest, TensorFlow, OpenCV, MLflow

## PROFESSIONAL EXPERIENCE

- **Morse Studio (GSU)** Atlanta, GA, USA  
August 2024 - Present  
*Graduate Research Assistant*
  - **AI/ML System Development:** Engineered neural network pipelines in Python with TensorFlow, OpenCV, NumPy, Pandas, and MLflow on Linux/GPU, leveraging SAM2-style segmentation to detect, track, and classify animal activities at scale.
  - **Web Platform Development:** Delivered the OGMS college platform using React, JavaScript, and Python with a PostgreSQL backend and AWS services, streamlining admissions, GTA, and GRA workflows and improving access to academic resources.
- **Amazon** Miami, FL, USA  
May 2025 - August 2025  
*SDE Intern*
  - **Marketplace Intelligence Platform:** Built TypeScript dashboards and React admin tooling over Go/Python services to surface marketplace performance insights, enabling partners to triage anomalies within minutes instead of hours.
  - **Low-Latency APIs, Ingestion & Quality:** Implemented REST services on AWS (Fargate, Lambda) with caching, tracing, feature flags, SQS/SNS, and DynamoDB streams, Great Expectations checks, and CloudWatch/Grafana dashboards that cut quality incidents by 60%.
  - **Full-Stack Testing & Automation:** Automated Playwright, Jest, and pytest suites across UI, API, and data layers, integrating with GitHub Actions to enforce regression checks at PR time.
- **Walmart** Bengaluru, KA, India  
April 2020 - July 2024  
*Software Engineer*
  - **Backend Platform Development:** Owned Python and Java services for catalog, pricing, and inventory domains, ensuring consistent downstream propagation under high update volumes.
  - **Microservices & Integration:** Designed RESTful and Kafka-based event-driven microservices to remove tight coupling, improve fault isolation, and enable asynchronous updates across distributed services.
  - **Data Pipelines & SQL Optimization:** Built PostgreSQL/MySQL pipelines and tuned queries/indexes to reduce latency and improve data freshness for operational dashboards and reporting.
  - **Scalability & Performance:** Profiled JVM/Python services, tuned concurrency and batching, and added Redis caching to cut API latency and maintain stability during peak catalog and pricing updates.
  - **Cross-Team Delivery:** Drove feature delivery with product, data, and QA by clarifying requirements, aligning API contracts, and executing integration/regression tests for on-time releases.
  - **Cloud DevOps & Production Support:** Automated build/deploy pipelines with Jenkins and Docker, instrumented SLIs/SLOs and alerts, and supported on-call rotations to reduce MTTR.
- **Cisco** Bengaluru, KA, India  
July 2019 - March 2020  
*Software Engineer*
  - **AI/ML Development & Automation:** Automated code generation with Python tools and AI plugins, saving 30 minutes per task and eliminating manual errors in domain and class creation across multiple codebases.
  - **Distributed System Architecture:** Architected modular backend services in Python, Node.js (Express), and TypeScript and deployed cloud-native systems with Docker and Kubernetes for enterprise workloads.
  - **Cloud Database Optimization & API Development:** Delivered secure RESTful APIs and optimized Python/SQL access across Teradata, BigQuery, and PostgreSQL with CI/CD and centralized monitoring.
  - **Cloud Migration & Performance Optimization:** Led migration of three distributed apps to AWS using Python automation, achieving \$10,000 annual savings and 99% uptime through performance tuning and load testing.

## PROJECTS

- **TailOR Dashboard:** (Computer Vision, Distributed Data Analytics Platform) Built an end-to-end analytics dashboard for behavioral video uploads, enabling real-time path tracking and social interaction analysis. Delivered a full-cycle frontend and Python/FastAPI backend with MLflow-tracked models and GCP data pipelines (Docker, Kubernetes jobs, REST APIs) for frame-level processing and visualization.
- **Pragyan Event Management Platform:** (Full-Stack Development, Cloud Services) Delivered a distributed web application for event registrations and management with automated workflows, real-time updates, and scalable microservices. Tech: Python, JavaScript, React, PostgreSQL, REST APIs, Docker