

Madhumidha S

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Education

SASTRA Deemed University

2023 – present

Bachelor of Technology in Computer Science and Engineering (Artificial Intelligence and Data Science)

- CGPA: 7.84/10.0
- **Coursework:** Computer Organisation and Architecture, Computer Networks, Data Structures, Design and Analysis of Algorithms, Database Management Systems, Natural Language Processing

Campus Involvement

Google Developer Groups (On-Campus Lead)

Organized 10+ events/workshops, engaging 400+ students and strengthening the campus developer community.

Internship

Presidio – Intern

- Worked on Full-Stack Development, DevOps, and Generative AI projects.
- Built cloud-native applications using Azure, Docker, and Terraform.
- Developed responsive UIs with React and REST APIs with Node.js.
- Improved team workflows using Git and CI/CD pipelines.

Projects

React Adaptive Load: Adaptive Energy-Aware React Preloading

github.com/Madhumidha-S/React-Adaptive-Load [↗](#)

- Built an ML-based prefetching system combining Multimodal Transformer + Markov models to achieve 98% prediction accuracy and reduce load latency.
- Implemented energy-aware loading logic adapting to battery/network conditions for efficient background requests.
- Tools Used: Python, TensorFlow, Keras, HAR Data Processing, Transformer Models

AgentCloud – Multi-Agent LLM System for Cloud Incident Response

github.com/Madhumidha-S/AgentCloud [↗](#)

- Developed a CPU-efficient multi-agent system implementing a ReAct (Reason + Act) pipeline to autonomously detect, diagnose, and resolve cloud incidents from real-time log streams.
- Engineered a modular agent architecture with LLM-based reasoning and SQLite-backed memory, enabling adaptive decision-making and improved recovery over repeated incidents.
- Tools Used: Python, LLMs (Qwen 2.5 GGUF), SQLite, Agentic AI (ReAct Framework)

URL Shortener

github.com/Madhumidha-S/url_shortener_backend [↗](#)

- Contributed the backend for a URL shortener service using RESTful APIs with Express.js.
- Implemented Base62-based short URL generation with redirection, analytics logging (timestamp, IP), and link deletion using PostgreSQL for persistent storage.
- Deployed on production server with PM2 and SSL configuration.
- Tools Used: Node.js, Express.js, PostgreSQL

Skills

Languages: C++, Python, JavaScript, Java, Swift

Technologies & Tools: React.js, Node.js, Express.js, REST API, PostgreSQL, MongoDB, Git, LLM (llama-cpp)

DevOps & Cloud: Docker, CI/CD, Terraform, Azure, AWS