

SAI SANDEEP MADABHUSHI

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Education

Master of Computer Science - 3.96/4.00

University of California, Irvine

Sep 2023 - Dec 2024

Irvine, CA, United States

Coursework - AI/ML, Database Management, Generative Models, Distributed Systems, IOT, Transactions

BTech in Computer Science and Engineering - 4.00/4.00

Jawaharlal Nehru Technological University, Hyderabad

Aug 2017- Jul 2021

India

Experience

Software Engineering Intern

Engage3, Powered by Dexi

June 2024 - Present

Irvine, CA, United States

- Architected a **distributed data processing system** using **Go**, **Apache Kafka** and **Hadoop** that increased the processing speed by **40%** and reduced processing costs by **30%**.
- Evaluated various **machine learning models** for data processing efficiency and accuracy, opting for a custom ensemble approach to balance speed and precision, resulting in a **40%** increase in processing speed.

Software Development Engineer - Apprentice

Amazon Web Services (AWS)

Jan 2024 - May 2024

Irvine, CA, United States

- Collaborated with **AWS** and contributed to the open-source development of a **real-time infrastructure for audio/chat translation** feature for Amazon Connect, **enhancing accessibility and customer service** for over **1000+** daily users.
- Developed and integrated AWS Lambda functions, Kinesis Media Streams and **APIs** such as AWS Transcribe, Translate and Polly into Amazon Connect, achieving **95%** translation accuracy and improving response time by **30%**.

Software Engineer

Tata Consultancy Services

Jul 2021 - Aug 2023

Kolkata, West Bengal, India

- Collaborated with cross-functional teams to design and implement a **distributed microservices architecture** using **Docker** and **Kubernetes**, improving the system scalability by **50%** and reducing deployment time by **30%**.
 - Developed and maintained **CI/CD pipelines** with automated tests to ensure bug-free code accuracy and minimized production issues by **30%**.
 - Actively participated in **troubleshooting data**, analyses, and code, and demonstrated ability to **identify root causes**, propose effective solutions and took responsibility in implementing next steps.
 - Balanced tradeoffs between serverless architectures (AWS Lambda) and traditional server-based solutions, achieving a significant reduction in infrastructure costs while maintaining performance standards.
 - Designed and developed **serverless architectures** using AWS services such as Lambda, API Gateway, S3, and DynamoDB resulting in improvement in system performance and **40%** reduction in infrastructure costs.
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Projects

SmartCustomer AI Chatbot (Python, OpenAI GPT-3, Flask, Docker, AWS Lambda, PostgreSQL)

- Developed and deployed a customer service chatbot using **OpenAI's GPT-3**, Flask, and AWS Lambda, reducing response time by **30%** and cutting infrastructure costs by **20%** through **scalable cloud deployment**.
- Integrated sentiment analysis with **85%** accuracy into the chatbot, significantly improving the understanding of customer queries and enhancing overall **customer satisfaction**.

Multi-Language Content Generator (JavaScript, Hugging Face Transformers, Node.js, Docker, AWS S3, DynamoDB)

- Engineered a content generation platform utilizing **Hugging Face Transformers**, Node.js, and Docker, increasing content creation efficiency by **50%** and user satisfaction by **40%** through dynamic multi-language content generation.
 - Designed and implemented scalable architecture with AWS S3 and DynamoDB for efficient storage and retrieval, ensuring seamless **API integration** and reliable performance across various environments.
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Skills

Languages: Python, C, C++, Java, JavaScript, Go, Microsoft SQL, XAML, GraphQL, TypeScript, Rust, C#, Terraform

Mobile and Web application development: React Native, HTML5/CSS, REST, Nginx, React, Express.js, Node.js, Flask

Distributed and Parallel Systems: Apache Spark, Docker, Kubernetes, Apache Kafka, Hadoop, Cassandra, gRPC

System Administration and Cloud Platforms: AWS, GCP, Azure, Linux, Server Management, Cloud Services, Suricata

Software Development and Databases: Agile, CI/CD (Jenkins), Git, Tableau, .NET, Matplotlib, Snowflake, PostgreSQL

AI/ML: TensorFlow, Scikit-Learn, GPT-3, NLP Libraries (e.g., NLTK, SpaCy), Hugging Face Transformers, PyTorch