# **GOWTHAM CHANDRASEKARAN**

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### **Professional Experience**

#### **Software Engineer,** Thereafter, Inc., United States

Aug 2024 - Present

- Developing and integrating transactional and promotional emails by leveraging **SendGrid**, **Nest.js** services, and event-driven **Angular** code, enhancing communication efficiency and user engagement.
- Contributing to the development of an AI Podcast Feature utilizing Retrieval-Augmented Generation (RAG) based models.
- Engaged in ad hoc development and maintenance across both front-end and back-end, providing code reviews and technical support to ensure consistent code quality and reliability.

#### Software Engineer, Jaunt, United States

Aug 2024 - Present

- Spearheaded the deduplication of 150,000 web-scraped articles by clustering latitude and longitude using **DBSCAN** and identifying duplicates using **Fuzzywuzzy**.
- Conducted comprehensive analysis and visualization of clustering results, providing actionable insights that refined text processing strategies.
- Leveraged AWS RDS with PostgreSQL to efficiently store and manage large volumes of web-scraped content, ensuring secure and scalable data storage.

#### Software Engineering Assistant, San Jose State University, United States

Dec 2023 - Jul 2024

- Developed a **Streamlit** chatbot with **OpenAI** and **SQL** database integration, enabling non-technical staff to easily retrieve information from the college database through English language interactions.
- Utilized Google Analytics for audience, acquisition, and behavior analysis and Siteimprove for fixing broken links.

#### Software Engineer, Tata Consultancy Services, India

May 2019 – May 2021

- Developed H&M's retail tags management dashboard, tailoring product tags creation and management based on different regions.
- Developed microservices using Spring Boot, enhancing the scalability and maintainability of the tags management dashboard.
- Utilized Hibernate for ORM, reducing database access times by 30% and improving application performance.
- Developed a **Single Page Application** (SPA) using **React** to analyze server metrics and handle tickets for Citibank.
- Visualized metrics using Chart.js to create graphs and pie charts, enhancing data interpretation and decision-making.
- Implemented lazy loading and utilized **React Profiler** to optimize application performance and improve user experience.
- Architected and deployed scalable and reliable solutions using AWS services such as EC2, S3, Lambda, RDS, and DynamoDB.
- Integrated AWS CloudWatch and CloudTrail with the dashboard for comprehensive monitoring and logging.
- Created **backend** services (StatusTracker, MetricsAggregator, TicketManager) using **Node.js** with **Express.js** framework, improving system reliability by 40%.
- Orchestrated CI/CD pipelines using Jenkins, Docker, and Kubernetes, ensuring seamless deployments.
- Led **Agile** sprints as Scrum Master, managing Kanban backlogs and retrospectives, improving team productivity by 50%.
- Formulated SQL and NoSQL (**Postgres**, **MongoDB**) queries and implemented stored procedures, triggers, and functions to automate workflows handling 15 million transactions.
- Enabled **REST** ful APIs using with OAuth 2.0 and JWT, enhancing security breach mitigation by 70%.
- Orchestrated CI/CD deployments with **Kubernetes** in OpenShift including liveness and readiness for each microservice.
- Adopted Test-Driven Development (TDD) with Jasmine, Jest, JUnit and Enzyme.

### **Technical Skills**

Languages : Python, Java, JavaScript, TypeScript, HTML5, C

Frameworks : React, Next.js, Angular, Spring, Kafka, Redux, NodeJS, Flask, Tailwind, Nest.js

Data Storage : PostgreSQL, MySQL, MongoDB, Cassandra, Redis, Oracle, DynamoDB

AWS Services : Cloud Watch, EC2, Load Balancer, Lambda, Elastic Search, API Gateway, SQS, S3, RDS

**DevOps**: AWS, Docker, Kubernetes, Openshift, Jenkins, Git

Networking and Tools : REST API, gRPC, WebSockets, Splunk, JIRA, GitHub, Hibernate

### **Projects**

## **Generative AI Fitness Coach:**

- Developed a scalable fitness coach chatbot application with **Next.js**, integrating **OpenAI APIs** for advanced conversational AI and managing authentication with **Clerk**.
- Utilized Prisma and Planetscale for database management, ensuring robust and scalable data handling.
- Deployed the application on **Vercel** and converted it into a **Progressive Web App** (PWA) to ensure cross-platform accessibility and a seamless user experience.

#### **Serverless Face Mask Violation Detection Application:**

- Implemented an efficient and cost-effective solution for real-time monitoring and alerting of face mask violations using AWS.
- Achieved 98% accuracy in face mask violation detection using **AWS Rekognition** for precise and reliable image analysis.
- Ensured scalability and zero downtime with a serverless architecture utilizing AWS Lambda, API Gateway, AWS SQS, and a load balancer.

### **Education**

San Jose State University, California, Master of Science in Computer Science, GPA: 3.92/4.00

Aug 2021 - Dec 2023