

# ANIRUDH EMMADI

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## EXPERIENCE

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### Full Stack Software Engineer, iLink Digital

Jul 2022 - Present

- Engineered Socket servers to integrate with Confluent Kafka and enable real-time data streaming events to be processed using kSQL queries, replacing overhead of traditional cron jobs, and increasing throughput by 200%.
- Architected data streaming pipelines to feed into Rockset VectorDB for powering specialized GPT-4 agents.
- Developed tools for real-time analysis of video feeds from multiple cameras to analyze objects, detect fires, and track crowd movement, using AI Computer Vision models, Python (PyTorch), Angular, and TypeScript.
- Created Terraform Infrastructure-as-Code (IaC) scripts to enable automation of multi cloud deployment workflows between Azure Cloud, Confluent Cloud, and AWS, reducing total deployment time by 30+ minutes.
- Implemented a meticulous refactoring process, transitioning codebase from React, JavaScript, and Python (Flask) into NextJS, TypeScript, and Serverless framework, improving code reusability and reducing engineering time by 50%.
- Maintained Docker containers and Kubernetes clusters on Azure Cloud and local on-premise Microsoft Edge Servers to achieve a hybrid cloud solution with a fallback strategy to reduce operational risk and optimize latency to under 20ms.
- Pioneered an A/B product testing framework to validate user assumptions and enable an incremental feature roll-out, empowering data-driven business decisions to maximize the impact of product enhancements.
- Produced numerous data metrics and analytics catered towards business intelligence requirements, while also providing comprehensive technical support to customers, product users, and internal teams.

### Cloud Software Engineer, BizCloud Experts

Sep 2021 - Jul 2022

- Designed and implemented scalable, production-ready cloud solutions for multiple companies, leveraging Amazon Web Services (AWS) such as Lambda, DynamoDB, S3, Aurora (PostgreSQL), and more, utilizing Terraform deployments.
- Spearheaded the migration of multiple Monolith systems to an Event-Driven Microservice Architecture on AWS, strategically scaling the product tech-stack to enhance performance and reduce cloud costs by over 40%.
- Streamlined architecture to achieve lower latency by introducing data streaming services like Amazon Kinesis for real-time data processing, resulting in a 20% reduction in overhead costs.
- Developed inventory management system and application for retail businesses leveraging React, Python, and MySQL.
- Created shared internal libraries to increase development velocity for cloud native development by 2x.
- Interfaced as a support engineer, conversing with users and businesses to provide technical support and perform Root Cause Analysis (RCA) investigations.

### Software Engineer Intern, Walmart Global Tech (Walmart Labs)

May 2021 - Aug 2021

- Developed internal tools for validating over 2 million records across multiple databases (Big Query, Cassandra, ElasticSearch) efficiently using Java & Google Cloud to ensure 100% data integrity, reducing monthly costs by over \$1,000.
- Contributed to multiple internal libraries to build abstractions and standardize database queries across the organization.
- Implemented data metric visualizations, automated alerting, and notifications using Grafana and Strati.

### Software Engineer, Toucan AI

May 2020 - May 2021

- Automated user metric collection on user behaviors, interactivity, and feature tracking to analyze and generate internal KPI dashboards, providing business intelligence teams accurate product insights and saving 10+ hours of manual work.
- Incorporated best practices for caching, rate limiting, and batch processing, to optimize various API endpoints and microservices, reducing latency by 100ms.
- Deployed various feature sets to 100+ customers with zero downtime and built internal admin dashboards for quick product lookups and updates, eliminating ad-hoc scripting.

## PROJECTS

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### Hifive ([hifivecommunity.com](https://hifivecommunity.com))

- Web based payments platform that enables hotel guests to tip employees and provide feedback anonymously, currently active in 80+ hotel locations across the country, and successfully processed over \$100,000 in transactions.
- Integrated with hotel enterprise platforms and payroll systems, automating payment disbursements and tax accounting.
- Leverages platforms such as: Clerk, Upstash, Highlight, and Infisical for authentication, data streaming, data monitoring & logging, and secrets management, respectively. Created using NextJS, Python, Go, Kafka, SQL, and Terraform.

## SKILLS

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**Languages/Frameworks:** JavaScript, TypeScript, React, NodeJS, NextJS, Python, Flask, Java, Maven, Spring Boot  
**Tools/Technologies:** REST API, SQL, MongoDB, Firebase, AWS (Lambda, SQS, DynamoDB, S3, Cloudfront, EC2), Serverless, Terraform, Docker, Kubernetes, Linux, Cassandra, ElasticSearch, Grafana, Redis, Kafka, Confluent, Cloudflare, Azure, Microservices, Git, GitHub, OAuth, JWT, Postman, JIRA

## EDUCATION

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**Bachelor of Science, Computer Science**  
The University of Texas at Dallas

Aug 2018 - May 2022