Siva Naga Teja

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💼 Professional Summary

- Experienced Software Engineer with over 2 years of expertise in developing scalable solutions across Python, C#, JavaScript, and cloud platforms. Specializing in Generative AI, cloud-based architectures, automation, and system performance optimization.

- Proficient in both frontend and backend development, leveraging React.js, Next.js, and .NET for web applications. Skilled in data processing and AI-powered solutions, particularly for video content analysis, live streaming, and metadata generation using Vertex AI and advanced AI models.

- Passionate about driving technological innovation and applying Generative AI techniques to solve real-world business challenges.

🥧 Professional Experience

YuppTv
Software Engineer

Sep 2022 – Present
Hyderabad, Telangana

> Over 2 years of experience in application development and web services with a strong focus on Python, Unix, and AWS.

> Created and optimized Python scripts for automating tasks, data processing, and system monitoring, contributing to operational efficiency and reliability.

> Developed Python APIs using CORS for secure cross-origin requests, Flask for efficient routing and handling, and async functions to enhance responsiveness and performance in handling multiple client requests simultaneously.

> Worked on integrating AI for video analysis, leveraging Vertex AI for clipping and metadata generation, streamlining the process of video categorization and highlighting key moments.

> Strong knowledge of Unix/Linux environments, with experience in creating and managing services, running APIs, and performing system operations.

> Proficient in using AWS services such as S3, Lambda, MediaTailor, CloudFront, MediaPackage, MediaLive, and Amazon EventBridge to build secure, scalable, and efficient cloud solutions that support robust security and performance requirements.

> Integrated React.js and Next.js for building dynamic, responsive web pages, utilizing modern frontend technologies to improve user experience.

> Extensive experience in video processing and live streaming, working with encoding, segmentation, encryption, and packaging

> Displayed talent in troubleshooting and resolving complex issues effectively, often under tight deadlines, to enhance system stability.

> Displayed adaptability and a proactive approach to learning new technologies and frameworks.

> Developed and maintained applications using Python and .NET, ensuring high performance, scalability, and adherence to security standards.

> Actively participated in code reviews, contributing to the improvement of development standards.

🎓 Qualification

◇ **Indian Institute of Information Technology**   2018 – 2022
Bachelor of Technology in Computer Science and Engineering - CGPA   *Kalyani,West Bengal*
- 6.81

◇ **Sri Viswasanthi Educational Institutions**   2015 – 2017
Board of Intermediate Education - M.P.C , Percentage - 97.1   *Krishna, Andhra Pradesh*

⚗ Projects

Livescript

> Environment : Python,AWS Cloudwatch,Linux

> Role : Lead Developer

> Description: A service to enable video-on-demand (VOD) content to seamlessly transition into live streams at scheduled times, with advanced ad integration capabilities and playlist management.

> Responsibilities :
· Led the full-cycle development of the tool from concept to deployment, leveraging Python to enable seamless live streaming.
· Implemented in-memory streaming to reduce file operations, enhancing both security and performance for live broadcasting.
· Integrated SCTE-35 ad markers for real-time ad insertion to maximize monetization opportunities, designed a failover mechanism to switch to filler VOD content for uninterrupted streaming.
· Utilized AWS CloudWatch for real-time monitoring and logging, allowing proactive detection and resolution of issues to maintain high service uptime.

Playout

> Environment : Next.js, Redis, Open Dashboard, Linux,PostgreSQL

> Role : Lead Developer

> Description: Migrated and optimized the existing Livescript service from a Python-based system to a high-performance Next.js-based playout service, enhancing efficiency, scalability, and real-time data handling.

> Responsibilities :
· Led the migration from Python to Next.js, working closely with senior deve to modernize and streamline the architecture.
· Implemented Redis for optimized caching and fast data retrieval, reducing latency and improving real-time playback performance.
·Incorporated PostgreSQL for robust and scalable data management.
· Integrated OpenDashboard for centralized log management, enabling better visibility into system operations and faster debugging.
· Reduced I/O operations by transitioning from file-based data handling to an in-memory streaming approach, significantly improving system performance.
· Ensured seamless data transfer and real-time communication using optimized event-driven methodologies, eliminating delays in media processing.
· Implemented a restream function to insert SCTE-35 markers into external URLs for ad monetization.

Videograph.AI

> Environment : C#, .Net, PostgreSQL, Linux, AI

> Role : Team member

> Description : Platform providing plug-and-play APIs for live streaming,recodring and on-demand video playback.

> Responsibilities :
  · Developed and optimized downloader and encoder tools for enhanced media processing.
  · Created APIs with complex database interactions in PostgreSQL, utilizing role-based access control (RBAC) to restrict sensitive data access and ensure secure API endpoints.
  ·Developed pages using React.js and Next.js for frontend functionality and optimized utilities in the background.
  · Integrated external subtitles into live streams to enhance accessibility and user experience while implementing SCTE markers for VOD to support ad insertion and content tracking.
  · Worked on Gen AI for generating metadata and clips after processing, enhancing automation and content categorization.
  · Employed data encryption for sensitive information storage and transfer, helping protect against unauthorized access and data leaks.
  · Performed bug fixes, ensuring the stability and reliability of the platform.

Yupp Encoder

> Environment : .NET,Linux,C#,AWS S3

> Role : Team Member

> Description : A .NET Console Application that runs in the background, encoding videos into HLS, AES, and DRM-protected streams, tailored for various client specifications

> Responsibilities :
  · Performed bug fixes to enhance the stability and reliability of the encoding tool.
  · Made modifications to meet specific client requirements, ensuring flexibility to handle different encoding configurations and DRM standards for diverse clients.
  · Optimized and customized the application to adapt to different client needs, enhancing compatibility and stream quality.

⚙ Skills

Languages   Python, SQL, C#, JavaScript (React.js, Next.js)

Technologies   AWS (S3, Lambda, MediaTailor, CloudFront, MediaPackage, MediaLive, EventBridge, Security Hub, IAM), GCP (Vertex AI, Cloud Storage), Unix/Linux, .NET, Git

AI/ML & Generative AI   Gen AI expertise: Text generation, video analysis, metadata generation

AI-powered Video Processing   Clipping, segmentation, enhancement using Vertex AI

Model Optimization   Fine-tuning LLMs, prompt engineering for AI tasks

Database   PostgreSQL, SQL

Developer Tools   VS Code, Visual Studio, Open Dashboard, JetBrains PyCharm