Erik Bahena

Software Engineer

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EXPERIENCE

Full Stack Software Engineer – *Invintus Media*

March 2022 - Present

Video Processing & Transcription:

- Designed and implemented a comprehensive egress system for live video processing, utilizing FFmpeg to handle RTMP input and HLS/MP4 output with complex pipelines for multi-bitrate streaming and simultaneous outputs for post-processing.
- Designed, developed, and optimized a live transcription system and a VOD transcription API, processing thousands of hours of legislative video, significantly enhancing accessibility and reducing reliance on third-party services.
- Implemented real-time captioning solutions, ensuring synchronization of captions with video and audio streams for seamless accessibility.

Performance Optimization:

- Optimized video encoding pipelines by ensuring Constant Frame Rate (CFR) from live input sources to MP4 outputs, eliminating the need for an entire additional transcoding step.
- Ensured high-quality video output by handling color space formatting and video resizing for diverse client inputs.

Project Management & Collaboration:

- Collaborated in a tight-knit team to improve video quality and performance, contributing to the development of scalable and maintainable applications.

EDUCATION

Full Stack Coding Bootcamp – *BloomTech*

Sep 2021 - Mar 2022

- Node.js, React, Python, Redux, SQL, Express, Computer Science Fundamentals, Responsive Design, Accessibility Standards

Grays Harbor College – *Aberdeen*

Sep 2019 - June 2020 (Some College)

- Recognized in Spring 2019-2020 Presidents List

SKILLS

FFmpeg, GStreamer, HLS, RTMP, H.264, Video Encoding, Transcoding, Python, JavaScript, Transcription

AWARDS

3rd place in SkillsUSA Mobile Robotics Competition

TECHNICAL PROJECTS

Live Video Processing System *Invintus Media*
- Designed an end-to-end live video processing pipeline using FFmpeg and GStreamer, supporting multi-bitrate streaming and real-time transcription.

VOD Transcription API *Invintus Media*
- Built a scalable API for processing and generating captions for video-on-demand content, utilizing Python and optimized batch processing.

Real-Time Captioning Application *Invintus Media*
- Developed a Python-based GUI + Gstreamer application for real-time NDI captioning, integrating with video and audio streams to provide live captions.