

SELECTED EXPERIENCE

Software Engineer	Mux Inc.	Sept 2024 - Present
<ul style="list-style-type: none">• Responsible for services ingesting/processing ~500,000 hours of video per month - Go, Kubernetes• Planned and implemented Dolby AC3 audio codec support, expanding audio delivery options for customers - C++, Go, HLS, FFMPEG• Expanded mezzanine storage codec to include HEVC source files. Highly impactful for our largest customer by cutting down video ingest times - Go, HEVC, Grafana• Created integration test framework for FFProbe, FFMpeg, and additional media binaries - Go, Tilt, Kubernetes		

Senior Software Engineer	Cinnafilm Inc.	June 2016 - Sept 2024
<ul style="list-style-type: none">• Core architect and developer of the PixelStrings video transcoding platform - Cinnafilm's flagship product and revenue generator. Platform has successfully delivered 100,000's of hours of video content across OTT, Broadcast, and Cinemas - Python, Typescript, Flask, Angular, SQLAlchemy, MySQL• Architected cloud infrastructure using Terraform for a resilient horizontally scalable video transcoding platform in AWS and Azure.• Implementation of SRT into streaming engine (Tachyon Live) enhancing low-latency video transmission and improving streaming performance and reliability for users - C++, C#, SRT, COM• Implemented robust test suite to execute in Docker boosting code coverage to 80%. This initiative led to 30% faster development cycles and cut bug reports by 50% - Docker, Pytest, Python• Created auto-generated documentation for APIs. Vastly sped up onboarding time for new API consumers leading to an API integration in less than a day - Python, Pydantic, OpenAPI, Redoc, Jinja		

PROJECTS

Asset Veranda // Media Asset Management Software

Developed a high-performance MAM supporting audio and video playback, ingestion, tagging, and searching.

- **Technologies:** C++ (Cross-platform Desktop Application), Python/Django (Web Interface and Server)

LineDream // Python Library

LineDream is an object oriented Python generative art library. It is designed for creating SVG outputs ideal for pen plotting.

- **Technologies:** Python, PyPI, Twine

TECHNOLOGIES AND LANGUAGES

- **Languages:** Go, Python, C++, JavaScript, TypeScript, HTML/CSS
- **Frameworks/Library:** sqlc, Flask, Django, FastAPI, SQLAlchemy, Pydantic, Pytest, boto3, stripe, Angular, Vue, HTMX
- **Media Libraries/Codecs:** MainConcept, OpenCV, SRT, FFmpeg, gstreamer, miniaudio, Blackmagic RAW SDK, H.264, HEVC, AV1, HLS, CMAF, fMP4
- **Tools:** Kubernetes, Tilt, Terraform, Ansible, Docker, Linux, Nginx, AWS, Azure
- **Databases:** MySQL, CockroachDB, PostgreSQL, SQLite, MongoDB, Redis

EDUCATION

DeSales University // Bachelor of Arts TV/Film, Minor in Business

2006 - 2010, Center Valley, PA