Luke Young

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SKILLS

- Python, C++, C#, REST API, .NET Framework, AWS, Microsoft Azure, GCP, MySQL, SQLite, Supabase, Docker, Git, VIM, Bash, Eclipse, PowerShell, MariaDB, XAML, WPF, Groovy, Pydantic, AppleScript, Cron, OpenAI & Anthropic API, OpenRouter, TypeScript, React, Next.js

WORK EXPERIENCE

Catalyst Operations & Analytics   Vienna, VA
Software Engineer Contractor   Jan 2025 – Present

- Developing AI tools for government clients, focused on real-time media processing and analysis.
- Built a GPU-accelerated audio transcription and search platform using Whisper and Elasticsearch for rapid, scalable indexing.
- Engineered advanced image and video enhancement pipelines using StyleGAN, Stable Diffusion, and RealESRGAN, integrated into a Docker-based web application.

Technologies Used: Python, Linux, Docker, Whisper, Elasticsearch, StyleGAN, Stable Diffusion, RealESRGAN, RabbitMQ, Redis

Quikirr   New York, NY
Software Engineer Intern   May 2024 – Sept 2024

- Developed a "Recurring Revenue Analysis" system for Quikirr's SaaS financial analytics platform, reducing processing time from 3 days to 15 seconds.
- Spearheaded a WACC DCF module in Quikirr's Excel suite, automating financial modeling and cutting tab generation from 2 hours to 5 seconds.
- Engineered an AI-driven data analysis pipeline for contextual interpretation, reducing insight generation from 4 hours to under 90 seconds.
- Developed an automated chart generation system integrated with ThinkCell's API, streamlining professional-grade visualizations.

Technologies Used: C#, XAML, MVC pattern, COM interop, JSON, LLMs, ThinkCell API

M_VIS   New York, NY
Contract Engineer   May 2024 – Present

- Built Allumare, a full-stack AI video synthesis platform with Next.js, Supabase, and Replicate API. Integrated Google OAuth, NextAuth.js, and multi-tenant RLS security for real-time user access and media management.
- Engineered FFmpeg-based media pipelines, serverless APIs, and edge functions for dynamic video generation. Designed webhook-driven workflows, signed upload/download system, and a CORS-free video proxy for seamless playback.

Technologies Used: Next.js, TypeScript, React, NextAuth.js, Google OAuth, Supabase, FFmpeg, Replicate API, Google Gemini API, Vercel

Ava (Secretary.my)   New York, NY
Co-founder & Software Engineer   Aug 2024 – Feb 2025

- Orchestrated an AI assistant for Gmail, Calendar, iMessage, and voice calling (Twilio + ElevenLabs), serving 10k+ daily requests and 20+ paying subscribers.
- Built a fault-tolerant multi-API pipeline with sub-second latencies, ensuring concurrency-based iMessage events and real-time voice reminders.

Technologies Used: Python, Twilio, ElevenLabs, Pydantic, Supabase, AsyncIO

Jackpine Technologies   Maynard, MA
Software Engineer Intern   May 2023 – Aug 2023

- Automated QA testing and migrated asset formats across Windows/Linux systems, improving coverage and accuracy in cloud environments.

Technologies Used: Bash, Java, PowerShell, JSON, Windows/Linux, Microsoft Azure, AWS, MariaDB

EDUCATION

Georgetown University   Washington, DC
B.S. in Computer Science   Expected May 2025

- GPA: 3.6/4.00

AWARDS

- First Prize Winner in the Elite International Music Competition at Carnegie Hall (2018, 2019, 2020).