

Luke Young

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SKILLS

- **Languages:** Python, C#, TypeScript, Bash **AI/ML:** Whisper, Ray, Stable Diffusion, Replicate, OpenAI/Anthropic/Gemini APIs **Frameworks:** React, Next.js, .NET, FastAPI, Framer Motion **Cloud:** AWS, GCP (Cloud Run, Transcoder, Storage) **Data:** PostgreSQL, Supabase, Elasticsearch **DevOps:** Docker, Git, RabbitMQ, Redis, CI/CD

WORK EXPERIENCE

Catalyst Operations & Analytics

Vienna, VA

Software Engineer Contractor

Jan 2025 – Present

- Built *Illumina*—Catalyst’s fastest sale—a GPU-accelerated Arabic speech platform that transcribes 3-hour files at 3× real-time and returns <1 s search latency via Elasticsearch.
- Architected a Ray-managed worker pool (6+ workers, 0.33 GPU each) with dynamic CUDA memory tuning and OOM self-recovery, ingesting 4 TB daily.
- Engineered fault-tolerant microservices with RabbitMQ queues and PostgreSQL persistence, sustaining 99.9% uptime and seamless failover for 10k+ daily Arabic-transcription API calls.
- Packaged an air-gapped Docker bundle with offline dependencies and auto-issued certificates, enabling fast deployment in classified environments.

Technologies Used: Python, Ray, Whisper, Docker, RabbitMQ, PostgreSQL, Elasticsearch, Linux

Quikirr

New York, NY

Software Engineer Intern

May 2024 – Sept 2024

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

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

m_vis

New York, NY

Contract Engineer

May 2024 – Present

- Built *Allumare*, a 3-stage AI video pipeline (Replicate → GCP Transcoder 4K → FFmpeg) handling 100+ concurrent renders, live dashboards, and OAuth multitenancy.

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

Ava (Secretary.my)

New York, NY

Co-founder & Software Engineer

Aug 2024 – Feb 2025

- Launched an AI assistant spanning Gmail, Calendar, iMessage, and voice (Twilio/ElevenLabs) via a fault-tolerant, sub-second pipeline that handles 10K daily events for 20+ paying users.

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

Jackpine Technologies

Maynard, MA

Software Engineer Intern

May 2023 – Aug 2023

- Automated QA and asset migration across Windows/Linux, boosting cloud test coverage and accuracy.

Technologies Used: Bash, Java, PowerShell, AWS, Azure, MariaDB

EDUCATION

Georgetown University

Washington, DC

B.S. in Computer Science

Expected May 2025

- GPA: 3.6/4.00

AWARDS

- First Prize — Elite International Music Competition, Carnegie Hall (2018, 2019, 2020).