

# Alan Szmyt

Wilmington MA 01887

<https://github.com/szmyty>

## Mission Statement

To design and engineer intelligent, adaptable, and elegantly built software systems that blend robust technical foundations with expressive, human-centered experiences.

## Work Experience

**MIT Lincoln Laboratory**, Lexington, MA – *Software Engineer, Associate Staff* April 2019 – August 2025

Developed full-stack geospatial and decision-support systems for government and research sponsors, integrating modern data engineering, visualization, and automation technologies to support mission-critical analysis and field operations. Worked across mobile, backend, and data systems to deliver prototypes and production-ready tools under real-world constraints. Highlights included:

- Led the creation of a mobile tracking system for USAID to monitor commodities in low-connectivity environments; successfully field tested the pilot in Texas for shipments to Africa, enabling reliable end-to-end supply chain visibility.
- Delivered a mobile prototype for humanitarian deconfliction notifications that allowed analysts to visualize no-strike zones and submit secure, auditable reports; the prototype contributed to a larger program that later received approximately \$1M in follow-on funding.
- Built a counter-human-trafficking investigation tool for law enforcement that enabled investigators to triage large volumes of digital evidence and reduce time to actionable leads.
- Developed an externally accessible, map-based decision support tool that allowed sponsors and analysts to visualize and contextualize datasets from a shared data hub, supporting higher-level awareness of complex information such as crop calendars and regional trends.
- Contributed to NATO disaster-response exercises by extending field-ready mobile capabilities, including map-based hazard and area-of-interest features and real-time location reporting, ensuring reliable situational awareness across multinational operations.
- Explored reproducible development environments to reduce friction in fast-paced research workflows, enabling faster context switching between prototype projects and smoother onboarding into new problem spaces.

*Technologies:* Python, Java, JavaScript, Android, Docker, Bash, PostgreSQL, MySQL, Elasticsearch, GeoServer, React, TypeScript, Kotlin, Dart, C++, Solidity

**Incompris LLC**, Wilmington, MA – *Founder & Music Business Architect* 2023 – Present

Founded and operated an independent creative-technical studio focused on integrating music production, automation, and software systems. Designed and implemented end-to-end workflows that combined creative tooling with platform engineering principles, emphasizing reproducibility, scalability, and efficient iteration across creative and technical domains.

Highlights included:

- Designed and implemented AI-assisted workflows using structured context and prompt engineering techniques to support music creation, visual design, and content iteration.
- Built custom automation and platform tooling, including shell scripts, Docker images, and GitHub Actions, to support local-first development and reproducible creative pipelines.
- Integrated external AI services, including the OpenAI API and Gemini API, to generate multimodal outputs such as audio, imagery, and video content.
- Designed automated royalty, income tracking, and business workflows using DistroKid, ASCAP, SongTrust, ZenBusiness, and GitHub-based documentation systems.

*Technologies:* Python, Bash, Docker, GitHub Actions, TypeScript, React, OpenAI API, Gemini API

**Taylor Networks, Billerica, MA – IT Support Technician**      *October 2017 - September 2018*

Provided IT infrastructure, networking, and technical support services for small business clients across multiple environments. Supported day-to-day operations by maintaining servers, networks, and end-user systems, and by responding to on-site and remote technical issues.

Highlights included:

- Configured and maintained Cisco ASA firewalls, including implementation of site-to-site VPNs for client networks.
- Administered Windows Server environments and managed user accounts, permissions, and access controls.
- Delivered on-site and remote technical support for network, hardware, and software issues.
- Performed HTML and CSS updates and assisted with website migrations for client-facing systems.

*Technologies:* Windows Server, Cisco ASA, VPNs, HTML, CSS

## **Education**

***Master of Science in Software Development***, April 2023

**Boston University, Boston MA**

Focused on software engineering, full-stack development, and system architecture. Capstone projects included a WAV metadata parser in Python, an Android beatmaker application using JNI and C++, and a personalized music recommendation system.

***Bachelor of Science in Computer Science (Minor in Mathematics)***, January 2017

**University of Massachusetts Lowell, Lowell MA**

Coursework included Operating Systems, Data Structures, Algorithms, Computer Graphics, and Discrete Mathematics. Participated in independent blockchain research on decentralized networks.

## **Interests**

Video games and game design, Dungeons & Dragons, AI-assisted music production, creative automation, open-source development, psychology and neurology, and personal development.