

Alan Szmyt
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<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:

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- 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.