

Robert Tylman

EXPERIENCE

Camp Solelim — Full-Stack Developer, Head of Programming

May 2021 — August 2025

- Built *CampSorter* (JavaScript, Python, SQL), a full-stack logistical platform that optimized camper scheduling and camp programming, significantly reducing administrative overhead; system has remained in active use since 2021.
- Independently led and operated the entire canoe tripping program, coordinating transportation, food logistics, and route planning across Northern Ontario, and personally guiding every trip for 300+ campers.
- Designed and implemented an interactive, full-stack canoe trip planning tool using the Google Earth Engine API to visualize routes, campsites, and meal plans for future trip leaders.

People's Group, Toronto, Ontario, Canada — Software Engineer & IT Analyst

Summer 2023

- Engineered Python automation pipelines to modernize legacy payroll workflows, eliminating manual intervention for high-volume data processing.
- Managed network infrastructure and provisioned security protocols to ensure the integrity of sensitive organizational data.

POST CITY Picture & Sound, Toronto, Ontario, Canada — Software & Audio Engineer

Summer 2022

- Developed proprietary scripts to automate the ingestion and synchronization of production assets, enforcing strict file structure validation and metadata consistency across large-scale media repositories.
- Designed and implemented standardized automated workflows for audio post-production, streamlining the delivery of editorial content and optimizing the signal chain for high-fidelity outputs.

MyPart, Tel Aviv, Israel — Music Technology Intern

September 2020 — January 2021

- Trained Deep Learning models in PyTorch for audio pattern recognition and metadata classification on large-scale datasets.
- Engineered feature extraction pipelines (tonality, rhythm, harmony) to enhance model accuracy for semantic search.

PROJECTS

Twist! — *Expo, Express, Gemini 3.0, Node.js, React.js, Redis, Socket.io*

- Built a production-ready multiplayer party game that transforms players' camera rolls into AI-generated challenges, featuring real-time image uploads, transformation pipelines, voting, and a responsive UI.

Chrome Recorder — *TypeScript, React, Web Audio API, IndexedDB*

- Built a high-performance Chrome extension for recording and editing browser audio, featuring real-time waveform visualization, background recording, lossless internal storage, and flexible export formats.
- Engineered a lossless audio pipeline for smooth playback and persistent storage.

Audio Plugin Suite — *C++, JUCE*

- Developed a suite of DAW plugins (Synths, EQs, Filters) for professional audio production, implementing signal processing algorithms and intuitive user interfaces

Sony WH-1000XM6 Headphones Collaboration

- Collaborated with Sony's AI and engineering team to evaluate ML-driven noise cancellation algorithm for flagship headphones
- Provided technical analysis of algorithm performance and acoustic behaviour

EDUCATION

New York University, Manhattan, NY

2025 — Present

- Master's in Engineering: Machine Learning, DSP and Audio Technology
- Focus on applied machine learning for signal processing and software engineering for audio systems
- Research in integrating large language models with audio software for enhanced interaction and automation

Vanderbilt University, Nashville, TN

- BS in Computer Science (Engineering), Concentration in DSP
- GPA: 3.83/4.00, (*Cum Laude, Dean's List*)
- Collaborated with Grammy-winning composer Pascal Le Boeuf as an Independent Study Student and TA, assisting with audio software development and course instruction
- Winner of the 2023 *Blair School Of Music Award For Innovative Creative Work in Audio Technology*

SKILLS

- Programming Languages:** C++, Git, HTML, Java, JavaScript, Node.js, Python, R, React, Rust, Socket.io, TypeScript
- Tools & Technologies:** Ableton, Docker, FL Studio, Logic Pro, Max/MSP/Jitter, Pro Tools, PyTorch, SQL, Unity