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Robert Tylman

EXPERIENCE

Camp Solelim — Assistant Director, Full-Stack Developer   May 2021 − August 2025

- Built *CampSorter* (JavaScript, Python, SQL), a full-stack logistical platform that optimized camp scheduling and 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 canoe trip planning system using the Google Earth Engine API to visualize routes, campsites, and meal plans, improving planning accuracy and reducing onboarding time for new trip leaders.

People's Group, *Toronto, Canada* — Software Engineer & IT Analyst   Summer 2023

- Engineered Python automation pipelines to replace legacy payroll workflows, eliminating manual processing for high-volume datasets and significantly reducing error risk and processing time.
- Managed and secured company-wide IT infrastructure, including user permissions, networking, and security protocols, protecting sensitive financial and employee data across the organization.

POST CITY Picture & Sound, *Toronto, 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++, Expo, HTML, Java, JavaScript, Node.js, Python, R, React, Rust, Socket.io, TypeScript
- **Tools & Technologies:** Ableton, Docker, FL Studio, Git, Logic Pro, Max/MSP/Jitter, Pro Tools, PyTorch, SQL, Unity