

Robert Tylman

PROFESSIONAL SUMMARY

Software Engineer with experience in machine learning, full-stack development, and systems engineering. Skilled in C++, Python, PyTorch, and modern backend/frontend tools. Proven ability to build scalable applications, design performant algorithms, and contribute to complex engineering projects, with expertise in applied ML and signal processing.

EXPERIENCE

People's Group, Toronto, Ontario, Canada — Software Engineer & IT Analyst	SUMMER 2023
<ul style="list-style-type: none">Developed automation tools in Python to process payroll and data workflows, eliminating manual stepsManaged network infrastructure, user permissions, and security systems across the organization	
POST CITY Picture & Sound, Toronto, Ontario, Canada — Software & Audio Engineer	SUMMER 2022
<ul style="list-style-type: none">Created scripts to sync production versions, validate file structures, and standardize timestamps and metadataDeveloped standardized template sessions for ADR and editorial workflows, streamlining delivery across large-scale projects	
Labs02, Jerusalem, Israel — Data Science Intern	01/2021 – 05/2021
<ul style="list-style-type: none">Built an organizational project-tracking platform using JavaScript and Python for multiple startup teamsCleaned, analyzed, and visualized multimodal sensor data from automotive experimentsSupported ML research on driver impairment detection using structured timing and response datasets	
MyPart, Tel Aviv, Israel — Music Technology Intern	09/2020 – 01/2021
<ul style="list-style-type: none">Trained ML models in PyTorch for pattern recognition and metadata classification in music datasetsWorked on tonality, rhythm, harmony, and semantic feature extraction tasks to improve model accuracy	

PROJECTS

Twist! — <i>Expo, Express, Gemini 3.0, Node.js, React.js, Redis, Socket.io</i>	
<ul style="list-style-type: none">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.	
Audio Plugin Suite — <i>C++, JUCE</i>	
<ul style="list-style-type: none">Developed a suite of DAW plugins (Synths, EQs, Filters) for professional audio production, implementing signal processing algorithms and intuitive user interfaces	
CampSorter — <i>JavaScript, Python, SQL</i>	
<ul style="list-style-type: none">Developed a full-stack logistical optimization tool to automate scheduling, assignments, and operations for large-scale summer programmingImproved administrative efficiency and reduced manual processing	
Sony WH-1000XM6 Headphones Collaboration	
<ul style="list-style-type: none">Collaborated with Sony's AI and engineering team to evaluate ML-driven noise cancellation algorithm for flagship headphonesProvided technical analysis of algorithm performance and acoustic behaviour	

EDUCATION

New York University , Manhattan, NY	2025 – PRESENT
<ul style="list-style-type: none">Master's in Engineering: Machine Learning, DSP and Audio TechnologyFocus on applied machine learning for signal processing and software engineering for audio systemsResearch in integrating large language models with audio software for enhanced interaction and automation	
Vanderbilt University , Nashville, TN	2021 – 2025
<ul style="list-style-type: none">BS in Computer Science (Engineering), Concentration in DSPGPA: 3.83/4.00, <i>Cum Laude, Dean's List (all semesters)</i>Collaborated with Grammy-winning composer Pascal Le Boeuf as an Independent Study Student and TA, assisting with audio software development and course instructionWinner of the 2023 <i>Blair School Of Music Award For Innovative Creative Work in Audio Technology</i>	

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