

Christian Petricca

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ABOUT

Software engineering graduate with a background that goes beyond programming — requirements analysis, human-computer interaction, and systems thinking. I focus on understanding the actual problem before reaching for a solution, communicate clearly with both engineers and non-technical stakeholders, and build things meant to be used and maintained, not just demoed.

SKILLS & TECHNOLOGIES

Languages: Python, Java, C/C++, SQL, JavaScript (Node.js, React)

Tools & Platforms: Git/GitHub, MongoDB, PostgreSQL, Express.js, Astro, Cloudflare Workers & Pages, Durable Objects, WebSockets

AI & Automation: Agentic workflow design, API orchestration (Anthropic, OpenAI), prompt engineering, iterative AI-assisted development

Core Strengths: Clear communication, collaborative problem-solving, requirements analysis, human-centered design thinking

Education: B.Eng. Software Engineering, McMaster University (2025)

PROJECTS

Panels — Real-Time Multiplayer Board Game · playpanels.app 2026

- Shipped a two-player online board game end to end — real-time WebSocket play on Cloudflare Workers and a Durable Object, room lifecycle with reconnect handling, and a five-tier CPU opponent (greedy heuristics through alpha-beta negamax) — with no framework, no build step, and zero runtime dependencies.
- Wrote the rules engine as a pure module shared verbatim by client, server, and test harness, giving client-side prediction, server-side authority, and headless self-play from one implementation; diagnosed and fixed a class of silent state loss where hibernation cleared in-memory rooms mid-game.

MeloScribe — Music Transcription Tool · github.com/cpet02/meloScribe 2025

- Built a Python CLI that identifies the key and main motif of a song, using Demucs stem separation and basic-pitch frequency analysis to attach high-confidence note events to a time-synced lyric file, with multi-instrument support.
- Designed around a philosophy of minimal assistance — leaning on what the computer does well (pattern detection, confidence scoring) while leaving interpretation and musicality to the human, rather than chasing full automation.

OmniPureGuard — Business Website (Paid Client Project) 2025

- Designed and built a production website from scratch for an agriculture-tech client with no prior web presence: Astro front end on Cloudflare Pages, Resend-powered contact forms, domain registration, and business email setup.

Music Discovery Scraper 2025

- Built a music discovery pipeline targeting AlbumOfTheYear.org using Scrapy, Selenium withundetected-chromedriver, BeautifulSoup4, and SQLite — enabling multi-genre, multi-year queries with score and review-count thresholds the site itself does not support.
- Implemented ethical scraping from the ground up: robots.txt compliance, randomized rate limiting, descriptive user agent.

EXPERIENCE

Key Lead · Sessions Nov 2025 – Present · Hamilton, ON

- Key Lead at a corporate, legally licensed dispensary chain, carrying forward the same standards of regulatory compliance, inventory accuracy, and customer service built in an independent retail environment.

Inside Technical Sales Representative · Evertz Microsystems Summer 2025 · Burlington, ON

- Elicited and translated complex client requirements into precise broadcast router system configurations for enterprise clients including NHL/NFL/MLB franchises, major telecoms, and NASA — contracts valued \$50K–\$200K+.
- Served as the technical checkpoint between sales and delivery — routinely identifying and resolving incompatible client configurations (mismatched I/O, connector conflicts) before they reached production, preventing costly errors on high-value contracts.
- Achieved 100% quote accuracy after the first month, onboarding into an unfamiliar A/V domain and reaching independent productivity quickly with proprietary tools and internal SQL-style databases.

Retail Key Lead · Bud Brothers Cannabis Jul 2022 – May 2025 · Hamilton, ON

- Operated independently as de facto second-in-command — opening and closing solo, documenting \$20K+ shipments, and maintaining 100% AGCO compliance across all audits without direct daily oversight.

EDUCATION

B.Eng. Software Engineering · McMaster University 2025 · Hamilton, ON

Relevant coursework: Requirements Engineering, Software Architecture, Human-Computer Interaction, Systems Design