Nelson, BC, Canada (Remote)
kamil@kamilkisiel.net
778-893-1337

Kamil Kisiel

linkedin.com/in/kamilkisiel
github.com/kisielk

Senior engineer with 20+ years of experience shipping products, from synthesizers to headphones with ML-powered voice processing. Specializes in getting real-time C/C++ code and on-device ML running fast on resource-constrained hardware, and has led the technical side from prototype through customer delivery, working remotely since 2014.

SKILLS

- **Programming Languages:** C++, C, Go, Python, Bash, Faust
- **Embedded / Real-Time:** ARM Cortex-M/A, Nordic nRF, Cadence/Xtensa HiFi 4/5, FreeRTOS, Zephyr, AVR
- **Audio / DSP:** acoustic echo cancellation (AEC), noise reduction (NR), active noise cancellation (ANC), AGC, VAD, beamforming, STFT; synthesis (VA & wavetable oscillators, filters), delay & effects
- **Performance Optimization:** fixed-point arithmetic, SIMD/HiFi intrinsics, profiling, memory/MCPS budgets
- **Frameworks / Libraries:** TensorFlow Lite/Micro, ONNX, JUCE, SciPy, tf.signal
- **Hardware / Protocols:** KiCAD schematic capture & PCB layout, JTAG, I2S, I2C, SPI, UART
- **Data / DevOps / Tools:** CMake, PostgreSQL, MySQL, Redis, SQLite, Elasticsearch, Jenkins, GitHub Actions, Docker

EXPERIENCE

Senior Software Engineer — **Synervoz Communications Inc.** — **2022 – Present**

- Led deployment and optimization of ML-based noise reduction pipelines in C++, C, and TensorFlow Lite/Micro across Cadence HiFi4/5 DSPs, ARM Cortex-A, macOS, Windows, and Linux.
- Brought models from Bose Corporation's ML research teams to production in shipped products.
- Owned technical client relationships, translating requirements into implementation plans and technical roadmaps.
- Ported and optimized real-time voice processing algorithms — including beamforming, EQ, and AGC — for Cadence HiFi4/5 DSP targets, meeting strict low-latency requirements for Bluetooth HFP telephony.
- Built audio quality validation tooling and test suites in Python, Jupyter, SciPy, and tf.signal to evaluate algorithm performance and catch regressions before release.
- Developed cross-platform JUCE-based demo and configuration applications used by internal teams and customers to evaluate and tune audio products.
- Maintained CMake-based build systems, CTest suites, Docker images, and Jenkins CI pipelines supporting multi-platform development and validation.

Desktop App Developer — **KVR Audio Inc. (Contract)** — **2022 – Present**

- Created and maintain KVR Studio Manager, a cross-platform C++/JUCE application for scanning and managing VST, AU, CLAP, and AAX audio plugins for music production.

Lead Software / Firmware Developer — **Intellijel Designs Inc.** — **2015 – 2022**

- Architected a C++ FreeRTOS-based firmware runtime for Eurorack synthesizer modules targeting STM32 ARM Cortex-M microcontrollers, adopted as the company's standard embedded platform and used in over a dozen shipped products, including flagships Metropolix, Plonk, and Rainmaker.
- Set coding standards and defined software build, review, and continuous-integration processes for other developers.
- Implemented and optimized audio DSP algorithms for synthesis, effects, and CV signal processing.
- Developed hardware drivers for I2S audio codecs, external DRAM, USB MIDI, SPI OLED displays, SD storage, and I2C peripherals.
- Built cross-platform JUCE applications for product configuration.

Senior Software Engineer — **Thomson Reuters** 2014 – 2015

- Developed core features of Nitro, the Go-based instant messaging server (XMPP/SIP) powering Eikon Messenger, the busiest chat system in finance (6M messages/day, 100k+ users).
- Worked in a distributed team of six on a clustered Go service backed by Redis and MySQL.
- Implemented zero-downtime restarts, faster inter-cluster messaging, pure-Go XML parsing, and XMPP XEP extensions.
- Integrated archiving and full-text search using Elasticsearch, and handled major refactorings in an extremely change-averse production environment.

Software Developer, Freelance — **Alces Technologies, Inc.** 2014 – 2023

- Supported large-scale data mining using Python and Pandas to analyze real estate databases for the Cullen Commission investigation into money laundering in British Columbia.
- Built web scrapers (Scrapy) and analysis workflows to process large, heterogeneous public datasets.

HPC Systems Engineer — **Zymeworks Inc.** 2007 – 2013

- Built a distributed scientific workflow framework (Go backend, Python DSL) enabling scientists to run large-scale simulations across millions of parallel jobs on the company's HPC cluster.
- Built and managed the in-house HPC cluster and software stack (100+ nodes, 100k+ daily workflow jobs), supporting the company's growth through a successful IPO.

OPEN SOURCE

- errcheck — widely used Go linter for unchecked errors (2.5k+ stars), bundled with golangci-lint: github.com/kisielk/errcheck
- Former maintainer, Gorilla Web Toolkit, including gorilla/mux, one of Go's most popular HTTP routers (20k+ stars): github.com/gorilla
- Original author of gostatsd, a Go port of statsd, adopted and maintained by Atlassian: github.com/atlassian/gostatsd
- godepgraph — dependency visualizer for Go: github.com/kisielk/godepgraph

EDUCATION

BASc, Computer Engineering Simon Fraser University 2007

INTERESTS

Music production & composition, guitar, bass, synthesizers; hiking, skiing, kayaking, mountain biking; woodworking, electronics, DIY