

Andrew Curiano

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Summary

- Product minded Software Engineer with expertise in systems integration and modern web technologies. Experience spanning low-level protocol handling and hardware communication to cloud infrastructure and React applications.

Technical Skills

- **Languages:** TypeScript, JavaScript, C/C++, Python
- **Frontend:** React, TailwindCSS, HTML/CSS
- **Backend:** Node.js, REST APIs, WebSockets, TCP Sockets, NAPI
- **Databases:** MongoDB, SQL
- **Cloud & DevOps:** Docker, GCP, GitHub Actions, CI/CD, Nginx, Gitlab CI
- **Protocols:** MQTT, TCP/IP, Binary Protocols, Mosquitto Broker, I2C, DMX
- **Tools:** Git, Linux/Unix, Wireshark, CMake

Software Engineer, Spacehead Labs, LLC *(Dec 2025 – Present)*

Contracted by Aloboi (2.3M monthly Spotify listeners) to develop AloBend Synth, a Just Intonation wavetable synthesizer VST plugin using C++ and the JUCE framework.

- Designed complete GUI with custom components and real-time visualizations.
- Configured CMake build system and GitLab CI pipeline for automated macOS/Windows releases.
- Developed DSP features including anti-aliasing interpolation, oversampling for audio quality, and real-time parameter automation.

Software Engineer, The Drone Racing League *(Aug 2022 – June 2025)*

- Extended the RaceStack API with an MQTT pub/sub layer, enabling external broadcast partners to stream race data supporting live coverage that reached 320M+ households.
- Developed native C++ NAPI addon to bridge firmware communication (C) with Node.js backend and React frontend, enabling type-safe data flow across the entire stack.
- Coordinated with firmware engineers to roll out communication protocol updates across a fleet of 600+ drones, designing and executing an extensive validation and staged deployment plan to ensure zero race-day failures.
- Reduced venue deployment times by 20% through Docker containerization and CI/CD optimization. (GitHub Actions, GCP)
- Built cloud data warehouse in partnership with Google Cloud, aggregating telemetry from the DRL simulator and live racing systems into BigQuery and MongoDB for analytics and post-event review.
- Integrated high-speed line scan camera with the Timing & Scoring application via TCP sockets and WebSockets, achieving millisecond-precision crossing detection for racing drones exceeding 90mph.
- Administered Linux systems across cloud and on-premises infrastructure, maintaining event-critical production environments for live international race events attended by 10,000+ fans.

B.B.A. Cybersecurity, Western Connecticut State University