

Tyler Dunn

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PROFESSIONAL SUMMARY

Software engineer with 4+ years building and operating production systems across web, embedded, and self-hosted infrastructure. Designs and runs CI/CD pipelines, containerized services, and secured network edges—from Cloudflare-tunneled APIs with managed traffic and rate-limiting rules to TLS-secured authentication flows that close credential-leakage vectors. Owns services end-to-end, from pipeline and protocol design through deployment, hardening, and reliability.

SKILLS

Languages: Python, C++, JavaScript, TypeScript, C#, Dart, Go

DevOps & Infrastructure: Docker, GitHub Actions, CloudFlare, Linux, AWS, PostgreSQL, Vercel

Frontend: React, Vue.js, Next.js, Qt

Backend & Systems: ASP.NET, Node.js, gRPC, Protobuf, REST, WebSockets, MQTT, Swagger/OpenAPI

Testing: Vitest, Jest, Pytest, NUnit

PROFESSIONAL EXPERIENCE

Metatronic LLC, *Software Engineer*

Nov 2025 – Current

- Drove the security analysis and designed a TLS-secured gRPC license authentication flow that replaced hardcoded SSH credentials, eliminating a credential-leakage vector from the TDR instrument software.
- Reworked the data pipeline in the TDR instrument application to sustain noticeably higher real-time streaming throughput, giving engineering users a smoother, more responsive live view during measurements.
- Drove final-stage production hardening and UI polish for the Python-based TDR application, converting designer mockups into PyQt6 interfaces tuned for engineering instrumentation workflows.

Astronics Test Systems, *Software Engineer II*

March 2023 – Nov 2025

- Led the Flutter front-end and MQTT data layer for a next-gen LMR test system, delivering smooth, reliable real-time updates that held up under sustained load.
- Established the CI/CD pipeline for the Flutter test-system project, automating builds and releases so the team could ship consistent, repeatable deployments without manual packaging.
- Migrated a legacy VB6 application to VB.NET and extended a custom C# control application to cover previously unsupported relays in a switching-system automated tester.

Astronics Test Systems, *Software Engineer I*

May 2022 – March 2023

- Engineered a high-volume real-time charting interface for hardware test systems, rendering large-scale temperature, voltage, and current telemetry to support faster test monitoring and analysis.

SwingThought, *Front-End Engineer (Contract)*

Aug 2021 – March 2022

- Built a custom WordPress plugin (jQuery/PHP) for dynamic player leaderboards and substantially improved page load times through plugin refactoring and asset optimization.

PROJECTS

MapleDoro

- Built a Next.js + React toolkit for MapleStory end-game players (progression calculators, reset/event trackers, and symbol/HEXA/boss income utilities), backed by shared TypeScript utilities and timezone-aware client-side state for correct daily/weekly reset rollover.
- Built and deployed an ASP.NET (C#) API on a self-hosted Linux server, exposed securely through a Cloudflare Tunnel with managed traffic rules and rate limiting and no open inbound ports.
- Tuned the Next.js/Vercel production build to near-perfect Google PageSpeed Insights scores across performance, accessibility, best practices, and SEO.

Reptile Enclosure Automation

- Designed and built the React Native frontend targeting web, iOS, and Android from a single codebase, with flows to provision and monitor any number of enclosures with per-enclosure sensor thresholds.
- Architected the Firebase + Express/Node backend with a multi-tenant data model, real-time temperature/humidity ingestion, and threshold-driven alerting that scales per account.

EDUCATION

University of Central Florida - Bachelor of Science in Computer Science

Jan 2019 – Dec 2021

Daytona State College - Associate of Arts

Aug 2016 – Dec 2018