

Chester Grudzinski

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PROFESSIONAL SUMMARY

Computer Engineer specializing in embedded systems, firmware development, and hardware design. Experienced with high-voltage battery management systems, PCB layout in Altium Designer, C firmware for real-time sensor monitoring, and embedded communication protocols including I2C, SPI, and UART. Brings additional depth in full-stack software engineering and production systems, enabling effective work across hardware and software boundaries.

EDUCATION

University of Texas at Dallas

Bachelor of Science, Computer Engineering.

Dec 2025

Tarrant County College

Associate of Applied Science, Information Technology.

Dec 2020

EXPERIENCE

Full Stack Software Engineer, Financial Analytics Platform

Jan 2026 – Present

TickerTrends

- Built a production report platform for delivering financial trend metrics using Playwright rendering, async job orchestration, WebSocket progress streaming, S3 caching, block-based templates, and LLM-powered summary generation.
- Hardened production security by patching ~70 SQL-injection vulnerabilities across 27 service files, securing internal endpoints, optimizing YoY computation from $O(n^2)$ to $O(n)$, and preventing Chromium OOM failures through concurrency limits.
- Re-architected cron orchestration by migrating tracking from Redis to PostgreSQL, adding health and error metadata across 39 scheduled workloads, and isolating cron processing onto dedicated backend infrastructure.
- Built resilient ingestion and analytics pipelines processing alternative datasets from social, search, web, and RSS sources, handling Cloudflare-blocked responses, malformed feeds, rate-limited APIs, and multi-year historical backfills.

IT Support Specialist, Accounting Firm

Jul 2025 – Jan 2026

Young and Associates Inc.

- Designed and deployed FastParse, a Python-based GUI tool that parses bank-issued PDF statements into structured accounting data, importing transactions directly into QuickBooks and eliminating reliance on paid third-party applications.
- Automated depreciation and amortization workflows by developing a Python automation bot for ATX, increasing data-entry throughput from 2.7 to 12.5 accounts per minute and reducing manual errors.
- Recovered critical financial data from a compromised BitLocker-encrypted NVMe drive, performing forensic-safe imaging, decryption analysis, and full Windows system rebuild to restore business continuity.

Systems Engineer, Battery Management System

May 2024 – Dec 2024

Dallas Formula Racing

- Designed and assembled a 720 V high-voltage battery management system (BMS) in Altium Designer; produced a functional prototype that passed all electrical safety tests.
- Developed embedded firmware for Texas Instruments battery-management hardware to monitor voltage, current, and I2C-connected temperature sensors (TMP100) for real-time thermal monitoring and early fault detection.

PROJECTS

Temperature Control System

Apr 2024 – Dec 2024

Dallas Formula Racing

- Implemented the I2C protocol in C (Arduino) to read temperature data from a TI TMP100 sensor using an ESP32-C3, including hand-soldering and correct I2C pull-up resistor design.
- Developed an embedded Wi-Fi HTTP server to display real-time temperature data for remote monitoring.

Raspberry Pi Self-Hosted NAS generlmoo.me

Sep 2025 – Present

- Designed and deployed a self-hosted Raspberry Pi 5 infrastructure platform with NVMe-backed storage, Cloudflare Tunnel remote access, OpenMediaVault monitoring, FileBrowser administration, automated backups, and Linux service orchestration.

SKILLS

Embedded & Hardware: Embedded Systems (C), SPI, I2C, UART, PCB Design, Altium Designer, KiCAD, Soldering, Oscilloscopes

Tools: Git, Arduino IDE, MATLAB, Verilog, VS Code, Multimeters

Programming Languages: C, Python, TypeScript, JavaScript, SQL, Java

Infrastructure: AWS, PostgreSQL, Linux (Debian), Node.js, Redis, React, Next.js, WebSockets, REST APIs