

DILLON GREEN

APPLIED AI ENGINEER · AVIATION & SIMULATION SYSTEMS

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SUMMARY

AI-native software builder with 8+ years in aviation systems: Boeing and Airbus avionics, full flight simulators, and FAA-qualified training devices. Directs AI coding agents (Claude Code, Anthropic API) like a small team while owning architecture, review and testing. Built and deployed a ~72k-line operations platform rolled out to a 40-person airline simulator department, plus a portfolio of shipped mobile and web apps. Seeking forward-deployed or applied AI roles where domain depth and fast shipping both matter.

SELECTED PROJECTS

Parts & Requisitions Platform — *Alaska Airlines Simulator Operations (internal, sole developer)*

Python · Flask · SQLite · Bootstrap · GDAL · PyInstaller

- Designed and built the department's inventory, procurement, work-order and budget system: ~72k lines, 231 routes, ~56 tables, three user roles and a full audit ledger; rolled out to a 40-person department, in daily use.
- Migrated off legacy MS Access and GigaTrak with 15 importers, including a reviewable two-way reconcile engine (field-level diffs, learned vocabulary mapping, idempotent history import that keeps the original timestamps).
- Built a schematics pipeline that converts 6,000+ CAE MicroStation DGN drawings to searchable SVG via GDAL and links part numbers on drawings to live stock.
- Added fleet-level reorder logic across 26 simulator devices at two sites: spares aggregation, critical and low-stock tiers, ABC/FSN classification; plus a REST API, QR labels printed to Zebra printers, and mobile photo capture.
- Backed it with 340+ automated checks (70 regression suites, 138 headless-browser end-to-end checks, a 30-thread concurrency test), a ratcheting quality gate, automated offsite backups and a one-file Windows service deploy.

pocket429 — *ARINC 429 decoder for avionics technicians (iOS, Android, web)*

JavaScript · Capacitor · Cloudflare Workers · Stripe

- Decodes and builds ARINC 429 data words (BNR, BCD, ISO-5, parity, bit-order detection) against a label database compiled from cited OEM manuals.

Crumb — *Recipe and meal-planning app (iOS, in App Store review)*

JavaScript · Capacitor · Swift · RevenueCat · Cloudflare · Codemagic CI

- Wrote a native Swift plugin for on-device Vision OCR, iCloud sync and a share extension; local-first sync design; subscriptions; 267 automated checks.

jaderealm — *Real-time multiplayer browser game*

JavaScript · Canvas · Cloudflare Durable Objects · D1

- Built live position sync, chat, trading and duels over hibernating WebSockets, with a player market stored in D1 (~11k lines).

factory — *AI-assisted product pipeline*

- Uses the Anthropic API to score ideas, draft store listings and summarize reviews, with Claude Code doing most of the build under human review.

Also built: [surprisepass](#) (live, Stripe payments), halvesies (receipt-OCR bill splitter), and butter and beepbeach (canvas games with physics and synthesized audio).

EXPERIENCE

Alaska Airlines

Seattle, WA

Flight Simulator Engineer

June 2025 – Present

- Engineer for Boeing 737, 787 and Airbus A330 full flight simulators on CAE XR, R4, R5 and L3Harris platforms, holding each device to FAA qualification standards.
- Lead the summer intern team building a standalone MPIC test bench: 16 MPICs in a dedicated I/O chassis, driven by a repurposed Windows Server 2019 sim node on its own 48-port network. The bench loads simulator software, tests I/O and checks aircraft panels without taking a training device offline.
- Write code-level fixes across simulator platforms for faults that hardware or configuration changes can't resolve.
- Design and implement MPIC interface modifications that improve system reliability.
- Built and deployed the department's parts, procurement and work-order platform (see Projects).
- Work with regulatory and pilot-training teams to sustain FAA-mandated qualification.

Flight Simulator Technician III

2022 – June 2025

- Maintained and troubleshot CAE and L3Harris full flight simulators, clearing time-critical faults before scheduled training sessions.
- Integrated new hardware through MPIC interface management; subject-matter expert for ISS/IOS issues.
- Resolved recurring discrepancies from schematics, wiring diagrams and pilot handbooks; kept FAA qualification records.

Panasonic Avionics — Maintenance Services Technician

2018 – 2022

- Performed systems verification and in-flight entertainment software validation inside Boeing 737 MAX and 787 production facilities ahead of customer delivery.
- Diagnosed complex faults across Boeing 737, 757, 767, 787 and Airbus A320 and A330 aircraft; ran software installs and end-to-end checkout in live airline operations.
- Supported engineers on electrical troubleshooting using wiring diagrams and system schematics.

SkyWest Airlines — Parts Clerk I (2018); Cross-Utilized Agent (2016–2018)

2016 – 2018

- Managed parts inventory and sourcing for CRJ and ERJ line maintenance; earlier, ramp, gate and customer-service operations.

SKILLS

- **AI & tooling:** Claude Code (multi-agent workflows), Anthropic API, prompt and agent design, AI-assisted testing and code review
- **Languages:** Python, JavaScript, Swift, SQL, PowerShell; working knowledge of C++, C#, Fortran
- **Platforms:** Flask, SQLite/PostgreSQL, Cloudflare Workers / Durable Objects / D1, Capacitor (iOS & Android), Stripe, RevenueCat, GDAL
- **Engineering practice:** automated regression and headless-browser testing, CI (Codemagic), data migration and reconciliation, backup/restore, Windows service deployment
- **Aviation:** Boeing 737/787 and Airbus A320/A330 systems, CAE XR/R4/R5 and L3Harris simulators, MPIC and ISS/IOS, ARINC 429, electrical schematics, FAA simulator qualification
- **Certification:** CAE XR Maintenance Certificate