ANDREW FERDINANDS

Applied AI & Automation Engineer

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Available for agreed US/APAC timezone overlap.

PROFESSIONAL SUMMARY

I build production AI systems — agents, APIs and automations — that run inside a real operating business. After a decade-plus running a 3,000+ event company, I began engineering systems to remove its bottlenecks: CRM, media production, photo intelligence and content operations. Those systems now replace $5,000+/yr of paid SaaS, cut manual workflows by up to ~90%, and powered content reaching 1M+ impressions in a month. In business since 2014 and 17+ years behind the camera, I've also designed, built and shipped a native iOS app (SwiftUI, StoreKit) and two pre-launch Apple-platform apps.

EXPERIENCE

Founder & Automation Engineer — ferdi.photography (est. 2014), Melbourne

Automation + creative AI practice, Nov 2025–present

- Built a production AI video pipeline with 300+ automated tests, 40+ named failure gates and 9 regression fixtures that verify generated media against source truth (WhisperX alignment, waveform QA).
- The pipeline turns a talking-head video into an edited, whiteboard-visualised long-form plus a full set of shorts — 5 videos from 1 hour of recording, 60+ shorts/EDLs shipped, manual content work down ~90% (measured before/after) and ~80 hrs/month reclaimed.
- Cut carousel production from 6 hours to 30 minutes per post with a research-verified carousel system.
- Eliminated $5,000+/yr in subscription spend by replacing multiple paid tools (CRM, auto-edit, auto-sort, auto-crop) with in-house builds — including a vision-based photo sorting engine and subject-aware auto-crop.
- Designed multi-agent workflows coordinating 30+ concurrent agents with task isolation, scoring and QA gates across research and production.
- Drove 1,000,000+ impressions in June 2026 on Instagram with the automated content engine (AI carousels + shorts).
- Published the pipeline's error analysis — 10 sections of documented failures and fixes: ferdi.tech/writing/what-the-machine-got-wrong/.

Business operations, 2014–present

- Delivered 3,000+ events and ~4.5M photos with a 20–30 person team; built @ferdi.photography to 40,000+ followers; shooting since 2009.

PRODUCTS & SYSTEMS

- **Autopilot CRM** — production business operations system — bookings, payments (Stripe), Gmail integration and automated client messaging running a real 3,000+ event business.
- **EDL Composer** — production AI video/evaluation pipeline — source-grounded AI video editing with automated QA and human terminal approval; 60+ shorts shipped.
- **Event Photography 101** — iOS app · Live on the Apple App Store — 59-lesson photography learning app (4 courses + Extras, 127 cheat sheets, 23+ hours of content). Personally built: SwiftUI app architecture, the lesson catalogue, offline video playback (HLS) and in-app purchase (IAP). Stack: SwiftUI, AVKit/HTTP Live Streaming, StoreKit. App Store: apps.apple.com/us/app/event-photography-101/id6805427157 · Site: ep101.app
- **Squeeze — macOS RAW photo shrinker** — Mac app · Live on the Mac App Store — Rust encoder writing JPEG XL inside DNG 1.7 + Swift macOS app; 62–95% smaller in tests across 5 camera brands; output matches Adobe's reference byte-for-byte on the measured mosaic files. App Store: apps.apple.com/au/app/squeeze-raw-photo-shrinker/id6824828556 · Site: squeeze.photos
- **Annotastic — Apple Pencil video-lesson app for iPad + Mac (pre-launch)** — Swift 6 strict concurrency, shared render package, Metal/PencilKit/AVFoundation, pixel-identical preview vs export, crash-safe incremental journal.
- **Kyurate.ai** — computer-vision photo sorting system — 1,000-photo batches auto-tagged and grouped; replaced a paid SaaS subscription.

TECHNICAL SKILLS

- **AI & agents** — agent orchestration (30+ parallel AI agents working asynchronously), LLM APIs, production prompt engineering
- **Engineering** — Python, Rust, REST APIs, JavaScript/React, PostgreSQL, Gmail API, Stripe, browser automation, macOS scripting, Git/GitHub, Zapier/Make where they beat custom code
- **Mobile** — Swift, SwiftUI, StoreKit, AVKit/HLS, iOS app architecture
- **Testing & reliability** — evals/testing, eval-driven iteration, governed pipelines with fail-closed checks
- **Creative systems** — AI image/video generation, content engines (carousels, shorts, long-form), photo intelligence (vision sorting, auto-crop, auto-edit), Photoshop/Illustrator, HTML/CSS

EDUCATION & CREDENTIALS

- Certificate III in Multimedia — Holmesglen Institute, 2013 · Top of class
- Published technical writing: ferdi.tech/writing/what-the-machine-got-wrong/ (error analysis of an AI pipeline)