

Aidan Davis

HARMONY
FULL-STACK ENGINEER · HOUSING INSPECTION PLATFORMS

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I am a developer who likes messing with new tech and agents, and taking what I build end to end to the people who actually use it.

I have been at RamRod Software since 2022, working across a housing inspection business. I started as the maintainer of the legacy system — nineteen C# projects, three Office add-ins, and SQLite files carried over a file share as the only transport between the office and the field.

Since 2025 I have been the principal author of its replacement: a Convex, Next.js, and React Native platform where I have written 1,100 of 1,150 commits. I care about the unglamorous parts — replay-safe sync, injection-safe emitters, permission boundaries — because that is where software quietly earns or loses trust.

SKILLS

Primary TypeScript · C# · Convex · React · React Native · Next.js
Working .NET · VSTO · Xamarin · SQLite · PowerSync · Expo · Bun · Elysia · Effect · Zod ·
Typst · Clerk · Azure · Azure OpenAI · Daytona
Familiar Blazor · Auth0 · PGLite · libSQL · Drizzle

EXPERIENCE

RamRod Software Pty Ltd 2022 – present
Full-stack engineer, housing inspection platforms

EDUCATION

Swinburne University of Technology expected 2028
Computer science, in progress

Housing inspection platform

IN DAILY USE

Darbecca's inspectors and office staff run their day-to-day inspection and office work on it.

REPLACED THE TOOLCHAIN

One system in place of three Office add-ins, a field app, and SQLite files passed over a share.

Choosing the infrastructure

BLAZOR FIRST

A 2024 Server prototype with MudBlazor, a SignalR calendar hub, and Auth0 identity.

RELATIONAL TRIAL

PGLite, libSQL, and Drizzle tested whether Postgres could carry offline field work.

Typed document compiler

TYPED IR

A Zod document model makes units, nesting, limits, and required images explicit.

ONE-WAY EMITTER

A visual AST with source spans compiles in a single direction to Typst source.

Offline field capture

SELF-HOSTED SYNC

I authored the sync rules and operated the replica set rather than adopting a hosted tier.

EXPLICIT CONFLICTS

Conflicts, tombstones, and upload checkpoints are tables, not implicit library behaviour.

Office and SQLite transport

NINETEEN PROJECTS

One solution spanning seven .NET target frameworks built in a single pass.

OFFICE AUTOMATION

Three VSTO add-ins drove Word and Outlook over COM interop to generate and deliver reports.