



ALEXANDER NEILL

Senior Software Engineer • 20 Years Experience

Ruby on Rails • Go • Python • Modern UI

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PROFILE & TECHNOLOGIES

Father of four • Pragmatic problem solver

14 years remote-first collaboration.

Bilingual (British & American English).



SIDE PROJECTS

Rehearse.app

2014-Present

11+ year booking platform for rehearsal studios. Rails 8, complex availability & SumUp iOS payments via Hotwire Native.

Rails 8 • Hotwire Native • Swift • Cursor

Driver First Assist

2018-Present

Charity first-aid training site. Automated toolkit ordering + self-documenting test suite with screenshot guides.

Rails • Hotwire • RSpec • Render

Accredit (AIMS-PICU)

2020

NHS mental health accreditation evidence system. Digital upload & assessor review. Featured in RCPsych newsletter.

Rails 7 • Kamal 2 • PostgreSQL

PROFESSIONAL EXPERIENCE



Senior Software Engineer - 2025 - Present

UK platform connecting parents with baby and toddler classes.

- End-to-end delivery of booking widget, provider onboarding & promoted listings ads
- Introduced BigQuery analytics pipeline + major performance & observability gains
- Integrated Claude Code as a daily coding assistant, writing a comprehensive codebase guide to improve AI output quality, and built custom skills for prompt generation and automated staging deployments
- Shipped GitHub Actions workflows to automate Jira ticket transitions on PR approval



Senior Software Engineer (13 years) - 2012 - 2025

Boutique consultancy building high-throughput ad-tech and data pipelines for global brands.

- High-throughput Go ad services for Verve & Infectious (Netflix, McDonald's, Adidas)
- Rebuilt Verve Location Services (VLS) in Go - ultra-fast device/location engine
- Reuters.tv video pipeline (DASH/HLS) + Nielsen scoring (10% → 80% match rate)
- VidMob ETL pipelines via Databricks integrating 6+ major ad platforms

Key clients:



Lead Web Developer - 2010 - 2012

Digital agency delivering varied web platforms for major clients.

- Led multi-tenant platforms for BBC Insight, O2, Williams F1, Jordan Publishing
- Created & open-sourced several Rails gems still used today

Key clients:



Systems Developer - 2007 - 2010

Formerly one of the world's largest ad networks, later sold to Verizon and merged into Yahoo.

- Part of 4-man UK innovation team (SCRUM) delivering European multilingual apps
- Built large-scale REST reporting, creative testing & sales dashboards



Lead Developer - Freelance - 2006 - 2007

Website where people discuss topics and formulate a balanced debate.

- Built proof-of-concept app, then architected social features & scalable platform
- Freelance lead on balanced debate discussion site

Profile & Technologies

• PROFILE

Enthusiastic and motivated **team player**.

Father of four, with a "**can do**" attitude to work and life.

• OBJECTIVES

Learn skills and technologies to **improve efficiency**, productivity and quality.

Understand practices and motivations to produce **better solutions**.

Innovate solutions for old problems to **stay relevant** and competitive.

• KEY SKILLS

Mindful design and development, adhering to web standards.

Experience in a range of web and development technologies.

A **pragmatic, creative** mind that can solve problems.

Personable with an **ever-helpful demeanour**.

14+ years of remote-first collaboration (since 2012).

Proficient **bilingual writer** (British and American English).

• CURRENT TECHNOLOGIES (LAST 6M)

RUBY

Rails 7 (Happity), Rails 8 (Rehearse.app)

JAVASCRIPT

Stimulus, Alpine.js, Turbo

CSS

SCSS, Bootstrap, Tailwind CSS

BACKGROUND JOBS

Sidekiq

ANALYTICS

BigQuery

TESTING

RSpec, Capybara

GIT

GitHub

DEVOPS

Docker

SWIFT

Hotwire Native, SumUp SDK

FORMATS

HTML, JSON, YAML

SQL

PostgreSQL / SQLite

CACHE

Redis

PAYMENTS

Stripe

AI

Claude Code (Happity), Cursor (Rehearse), Ollama, CrewAI

PLATFORM

macOS

CI

GitHub Actions, Jira (PR workflows)



happity.co.uk

2025 - Present · Senior Software Engineer

OVERVIEW

Happity is a platform connecting parents with baby and toddler classes across the UK, serving both class providers and the families who book them.

Product delivery

Led end-to-end delivery of multiple features on the Ruby on Rails platform, including an embeddable third-party booking widget, a provider onboarding pre-approval system, and a promoted listings advertising product. Overhauled newsletter infrastructure, introduced a BigQuery analytics pipeline, and significantly improved platform performance and observability.

AI-assisted development

Used Claude Code as a daily coding assistant, writing a comprehensive CLAUDE.md codebase guide to give the AI deep context on conventions, architecture, and patterns, significantly improving the quality of AI-generated code.

Built custom Claude skills for the team that generate Happity-specific prompt templates for starting new tasks, and that automate the merge, conflict resolution, and deployment workflow as well as GitHub Actions workflows to automate Jira status checks on PRs and auto-transition tickets.

Day to day

Day-to-day this meant touching everything from database design and background jobs through to frontend interactions and third-party integrations, working closely with a small team to ship features to a tight product roadmap.

TECHNOLOGIES/LANGUAGES

Ruby, JavaScript, HTML, CSS, SCSS, SQL, Bash

FRAMEWORKS/LIBRARIES

Ruby on Rails, Turbo, Stimulus, Alpine.js, Sidekiq, RSpec, Capybara, Stripe, PostgreSQL, Redis, BigQuery

TOOLS

Claude Code, GitHub Actions, Jira

blacksquaremedia.com

February 2012 - May 2025 · Senior Software Engineer

OVERVIEW

Black Square Media grew from a team of 4 in 2012 to a team of 7 at its peak. We built and operated services supporting some of the biggest brands in the world including; Target, Nissan, McDonalds, Netflix, Adidas and Expedia.

Ad platforms

For the majority of my time at Black Square, I was building various ad-support services for two main Clients, Verve Mobile and Infectious Media.

Both of these companies needed high throughput advertising solutions (built using Go), order management systems (built using Ruby on Rails and AngularJS) and integrations with ad server platforms such as Google Ad Manager (formerly DFP).

Verve Location Services

One service I'm particularly proud of is Verve Location Services (VLS), it is at the core of a Verve Mobile's location offering. Originally built in Lua, then rebuilt in Go, VLS is blisteringly fast at taking minimal user and device information, analysing it and calculating the precise location and quality of the request.

VLS uses data from various sources (DeviceAtlas, OpenStreetMap, MaxMind, NetAcuity etc.) to extract device information, network level accuracy and physical address (even weather). It also acts as a user store, allowing accurate home/work location tracking as well as segmentation and audience matching.

Reuters.tv video pipeline

I developed a video conversion and packaging pipeline for Reuters.tv (part of Thomson Reuters). To enable them to normalise ads served on their site and inside their apps, and allow the most efficient streaming possible, they required any video ad used to be transcoded to several variants of differing qualities then all packaged into both an MPEG-DASH and an HLS format.

Nielsen metadata pipeline

We worked for Nielsen on a data ingestion, scoring and fixing pipeline in Go. It took huge CSVs of video and audio metadata from various platforms and apps and, using the GracernoteDB, matched program titles to known data.

The pipeline improved the accuracy and speed of the system phenomenally, it went from a 10% to an 80% match rate and from one file ingestion taking several hours to just minutes.

VidMob analytics integration

Most recently, we worked with VidMob integrating with their Ad partner platforms e.g. Facebook, Snapchat, Reddit, Pinterest, LinkedIn and Google Ad Manager (formerly DFP), to pull in dimension, metric and analytics data from their APIs and transform it and push it into various databases. Primarily this used a combination of Go services Fetch and State and a Platform Handler written in TypeScript, then the pipeline was executed via a Workflow in Databricks.

TECHNOLOGIES/LANGUAGES

Python, Go, Ruby, Lua, HTML, HAML, XML, CSS, JavaScript, CoffeeScript, TypeScript, Redis, Couchbase, PostgreSQL, MySQL, ffmpeg

FRAMEWORKS/LIBRARIES

Ruby on Rails, Vue, jQuery, AngularJS, Bootstrap, RSpec, Ginkgo, Turnip, Databricks

I Driver First Assist

Mid 2018 - Current · Solo Dev

OVERVIEW

Background

Helping a family friend out with his charity which has trained over 1500 people in first aid.

Application

The project consists of a manager which has a section for Trainers to see their upcoming courses and their attendance, and a Members section where they can see their courses and order a toolkit.

Toolkit ordering

Instead of manually ordering a toolkit for each member, the site allows for members to select their size and enter their postal address and it will use Mechanize to automatically log in, select a toolkit size, enter their address and submit the order.

Documentation

The customer-facing documentation is something I'm very proud of. I piggybacked the system tests, adding JavaScript helpers and using CSS to highlight areas of the screen, then automatically took screenshots after each successful test, combining these images in markdown. This was then processed into HTML with the generated images being cropped, using imagemagick, so only the highlighted areas are included in the documentation. This all happened post successful test time, so new documentation is available after each feature is added - a public-accessible section can be seen here: <https://secure.driverfirstassist.org/help/clients/courses.html>

This approach has since been extracted into [DRYDoc](#) (Don't Repeat Yourself Documentation) gems.

TECHNOLOGIES/LANGUAGES

Ruby, HTML, HAML, XML, CSS, JavaScript, Redis, PostgreSQL, Render.com

FRAMEWORKS/LIBRARIES

Ruby on Rails, Hotwire (Turbo, Stimulus), Hotwire Native, jQuery, Bootstrap, RSpec, Mechanize

TOOLS

[DRYDoc](#)

I Rehearse.app

December 2014 - Current · Solo Dev

OVERVIEW

Background

A side project brought about by a local rehearsal studio not having a booking system, I reached out to the then owner Josh and I started building Rehearse around his needs.

Rehearse Pay

11+ years and 2 owners later, Rehearse is still going strong and now has [Rehearse Pay](#), an iOS integration for customer in-person payments. It's a hybrid Hotwire Native app that uses the SumUp SDK to take payments and mark sessions as paid.

Recent upgrades

In the last six months I upgraded Rehearse to Rails 8 with ongoing feature work; Cursor is my day-to-day coding environment for the project.

Platform and demo

The main website has built up a lot of features over the years including complex timeslots, restrictions and availability. There's extensive SQL for converting these into a time series for use in the booking grid. An example account is available at <https://test-flight.rehearsal.studio/>

TECHNOLOGIES/LANGUAGES

Ruby, HTML, HAML, XML, CSS, JavaScript, Redis, PostgreSQL, Swift

FRAMEWORKS/LIBRARIES

Ruby on Rails 8, Hotwire (Turbo, Stimulus), Hotwire Native, SumUp SDK, jQuery, Bootstrap, RSpec

TOOLS

Cursor

I Accredited (AIMS-PICU)

Mid - Late 2020 · Solo Dev

OVERVIEW

Background

Helping my wife with her Accreditation for AIMS-PICU, which was an accreditation scheme, working with inpatient mental health services to assure and improve the safety and quality of services and their environments.

Product

At the time there was no way for NHS Mental Health services to collect evidence digitally to submit for accreditation. The idea for the project was to digitise the standards, then to upload evidence for each standard so that Assessors from the Royal College of Psychiatrists (RCPsych) could log in, review and approve the evidence.

Outcome

Unfortunately my wife was driving the project internally and she went on maternity leave halfway through, so while it did help, it never quite got used to its full capacity. It did get a mention in the RCPsych newsletter and a year later when she came back onto the project the RCPsych had built their own version, so I hope it helped in some way. The project, dubbed Accredited, is still up at <https://aimsadmin.app> with a demo organisation (please ask for demo access), recently updated to Rails 7 and deployed with Kamal 2.

TECHNOLOGIES/LANGUAGES

Ruby, HTML, CSS, JavaScript, PostgreSQL, Kamal 2

FRAMEWORKS/LIBRARIES

Ruby on Rails, Hotwire (Turbo, Stimulus), Bootstrap, RSpec, Kamal 2

rawnet.com

April 2010 - February 2012 · Lead Web Developer

OVERVIEW

Agency context

Rawnet is an agency, consequently there was great variety in the projects that were commissioned.

The following is a sample of the longer-running projects where my role was Lead Developer or Co-lead Developer.

Selected client projects

- Britain's Advanced Mainstream (BAM) - A service that shares attitudes and behaviours of tech-users with media industry subscribers
- BBC Insight - The forerunner to BAM; Essentially BAM just for the BBC. (I took this project on and rebuilt it as the multi-tenant app BAM)
- OWL Group (50Connect.co.uk/OlderIsWiser.com) - Multi-tenant Article and Forum based social network for the older generation.
- LoveThis.com - Recommendation engine/app (now externally developed)
- O2 Profiler - Self profiling/assessment tool for O2 employees
- Jordan Publishing - Internal CRM and iPad app for solicitors to look up case history in court.
- AT&T Williams/Williams F1 - Various on-going updates to their sites, prototyping an iPhone app.
- O2 Recruitment Game - A pre-CV recruitment tool for O2
- Craster.com - A revamp of a rather drab product site
- CBS Planning Platform - Tree-based profit forecasting tool

Internal tools and open source

In addition to the above projects we developed a lot of internal code that helped generate new apps quickly or build standard CMSs.

Some of this work was open sourced, but most remains in private repositories or often just supporting sunset products.

- redis-column gem - stores heavy objects away from tables with a lot of rows
- dynamic-fields gem - automatic migrations for ActiveRecord
- oa-google-and-yahoo gem - OmniAuth for Google and Yahoo
- contact-list gem - Multi-provider contact list via OmniAuth
- Precious Gems - A pseudo-framework for building apps rapidly, initially deployed with OWL Group projects, a modular gem system using my dynamic-fields gem to extend themselves and model functionality, precious-tagging, precious-friendships, etc..

TECHNOLOGIES/LANGUAGES

Ruby, HTML, HAML, XML, CSS, JavaScript, CoffeeScript, MySQL

FRAMEWORKS/LIBRARIES

Ruby on Rails, jQuery, BackboneJS, RSpec, Cucumber, Titanium

advertising.aol.co.uk

September 2007 - February 2010 · Systems Developer

OVERVIEW

European innovation team

AOL Advertising (formerly Advertising.com) had one of the largest advertising networks in the world; the business was later sold to Verizon and merged into Yahoo's ad platform. Their operation for the U.S market was maintained by a large team in the U.S, whereas our small four-man team was based in the UK and hired to drive innovation for Europe. We used agile methodologies (SCRUM) to create and iterate on multilingual applications for the entire European business - later these applications and processes would be used as the basis for optimising the U.S team.

Applications delivered

These applications included; Email based request queuing and creative testing services (decompiling flash files and checking click tags, parsing html and JavaScript page inserts for malware and verifying image file metadata);

Large scale, client facing, multi-lingual REST based reporting services (both Service and Client);

Company Sales Dashboard (Service - RoR, Client - Flex) showing graphs/charts.

TECHNOLOGIES/LANGUAGES

Ruby, Actionscript 3 (Flex), HTML, XML, CSS, JavaScript, JSON, MySQL

FRAMEWORKS/LIBRARIES

Ruby on Rails, Metal, Prawn, RubyNetLdap, Reto18n, Flex Charting, OpenFlashCharts, Blueprint CSS, Prototype JS, Plexigrid (<https://github.com/dim/plexigrid>), jQuery, RSpec, Cucumber, TestSpec

debatewise.org

2006 - September 2007 · Lead Developer - Freelance

OVERVIEW

Debatewise is a website where people discuss topics and formulate a balanced debate.

I successfully created a basic proof of concept application and was then offered a role architecting and developing the extra, social aspects of the site, as well as designing a more scalable platform.

TECHNOLOGIES/LANGUAGES

Ruby, HTML, CSS, JavaScript

FRAMEWORKS/LIBRARIES

Ruby on Rails, Prototype JS, RSpec