

Summary

I'm a pragmatic full-stack software engineer based in London with 20 years of multifaceted expertise in diverse tech stacks. From designing APIs for multinationals to fixing spreadsheet workflows for small charities, my focus is always on understanding user needs to make technology work for them.

Work

Codev Limited: Founder and Principle Engineer

2006 - Present

- Founded and managed a software consultancy firm, leading a team of up to 5, handling website, app, game, and database projects. Successfully published iOS apps under the Codev brand.
- Clients include LEGO, University College London, Hasbro, Demos, Reprieve, Pinnacle Entertainment and the Huntington's Disease Association.

Projects at Codev

University College London Biobank

2012 - Present

Rails, Rust, Postgres

- ISO27001-compliant sample tracking for 12 clinical trials with thousands of samples across multiple locations.
- Rails with Rust for performance-critical operations; robust access controls and audit logging.
- In continuous use for over a decade.

Room To Heal Database

2017 - Present

Rails, Postgres, OAuth

- Secure case management for torture survivor charity tracking therapy, casework and gardening interventions.
- Custom query language for stakeholder reports; annual user research days to evolve with staff needs.
- Room to Heal: Charity Champions (Comic Relief), praised by Lloyds Foundation, invited by UN to train others.

London Renters Union RRO System

2020 - 2022

Rails, Airtable API, wicked_pdf

- Automated court applications and legal bundle generation for Rent Repayment Orders.
- Rails with Airtable backend to work on existing system; PDF generation and document pagination.
- 100+ tenants supported, £250k in repayment orders won.

aiMARK AI Poetry Generator

2021

Python, GPT-3 API, React

- Won Arts Council grant with professor Aimee Le for AI poetry tool.
- Rails powered GPT-3 platform for idea generation and switching between poetic forms.
- Toured workshops in London, Cornwall, Athens, South Korea; published research.

British Sign Language Signbank

2015 - Present

Django, MySQL, FFMpeg

- Adapted existing sign language platform for BSL: adding regional variants, visual search by sign features, researcher editing tools and FFMpeg video processing. Serving researchers and the deaf community.
- Live at bsl.signbank.ucl.ac.uk

Roche and HDYO Registry

2020

Node.js, MongoDB, Express

- Roche/HDYO partnership: registry for juvenile HD families to share care experiences.
- Secure handling for sensitive family health data, informed future care and research approaches.

iPhone Apps

2006 - Present

iOS, Objective-C, Swift

- iOS apps published under the Codev brand:
 - *OneMail* - secure email client
 - *VertiGo* - vestibular rehabilitation app for dizziness
 - *Formulary* - pharmaceutical reference guide with tens of thousands of downloads per month
 - *OptOK* - universal toolkit for eye examination including acuity, reading and optokinetic nystagmus tests
 - *Dermatomes* - popular medical guide featured by Apple in their 'Back to Medical School' guide

UCL Neurology Archives Project

2017

Rails, Postgres, Full-text search, IIIF

- Digitised 3500 items from Queen Square Library's neurology archives.
- Full-text search, IIIF high-res images, video player, synced with UCL main library.
- Live at queensquare.org.uk

HDBuzz Scientific Research News Network

2011 - Present

Rails, MySQL, i18n

- Rails CMS for HD research news in plain language, translated to 18 languages including Arabic and Chinese.
- 50+ writers, ~200 translators distributing to global HD support networks.

Work

Qube Software: Lead Programmer

2001 - 2006

- Lead programmer on 'LEGO Digital Designer' — software for building LEGO models virtually and ordering the physical bricks to build the models - millions of downloads.
- Organised and led a team of four programmers for six releases of LDD using the scrum project management system. While at Qube I also worked on:
 - LEGO Creator: Harry Potter and the Chamber of Secrets
 - Calcaphon (a game for Virgin Interactive)
 - Dinosaur: A Living Film (a game for Microsoft)

Projects at Qube

MMO Game Specification

2006

Scrum, Kid-centric play-testing

- Functional and technical specification for MMO based on major multinational's IP.
- Game systems design, technical architecture, implementation roadmap.

LEGO Cross-Platform Brick SDK

2005

UML, C++

- Architected cross-platform LEGO brick SDK; ported LDD to Mac OS X.
- Gamecube demo app and cross-platform screensaver to showcase SDK capabilities.

Requirements Checker

2003

C#, C++, MSI, Carbon

- Self-service system requirements checker for LDD and Earthsim.
- Reduced support calls by 40% by helping users diagnose compatibility issues.

Education

1998 - 2001

Jesus College, Cambridge University, BA Hons Computer Science, 1st Class

Dissertation: 'A wide-scale distributed file sharing system'

Skills

Specialisms

Audit-compliant secure record systems for healthcare and research · User-first system architecture and engineering

Core Stack

Ruby/Rails · Python/Django · Postgres · Node.js · Docker

Additional Skills

iOS (Swift/ObjC) · TypeScript · React · Airtable

Background

C++/C# games development (DirectX, Mac, PlayStation, Xbox, Nintendo)