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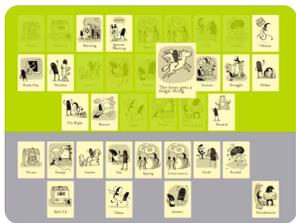


I'm a **full-stack product developer** and **technical lead** with 24+ years experience in web development, iOS development, team leadership, research, and teaching. Colleagues appreciate my deep systems thinking, quality of writing, and humour. I'm committed, hard-working, creative, and pay attention to detail. I enjoy learning and communicating, making complex concepts straightforward and accessible.

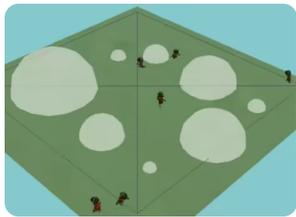
Selected Works



Find Me: an iPad game for children with autism (2011)



Story Maps: a story-writing app for children (2011, [website](#))



PandaSteer: 3D game characters that navigate and avoid obstacles (2009, [website](#))

Selected presentations:

[The Two Generals' Problem](#) (2026)

[Python Code Design](#) (2019)

Selected writing:

[Hypothesis Engineering Values](#) (2021)

[Designing Python Exception Classes](#) (2019)

[Code Review](#) (2016)

Selected projects:

[Oatcake](#): a CSS typography stylesheet (2025)

[Sidecar](#): a blog theme (2025)

[Terminal Velocity](#): note-taking app (2012)

Publications:

[Children's Story Authoring with Propp's](#)

[Morphology](#) (PhD thesis, 2011)

[Children's Story Authoring with Propp's](#)

[Morphology: An Exploratory Study](#) (2008)

[Player Agency in Interactive Narrative](#) (2007)

Teaching:

[Java Programming MSc course](#) (2008)

Experience

Hypothesis

2015-2025

Senior Developer → Lead Developer → Principal Engineer

As **Principal Engineer** I acted as engineering manager (with four direct reports) and project manager. Described as a “force multiplier” and an “influential leader who engineers follow by default,” I drove consensus between product and engineering: translating requirements into designs. I set engineers up for success: maintaining focus and clearing obstacles.

Sean and the engineering team have shipped every major deliverable early even while absorbing extra load ... Sean consistently provides world-class delivery and the level of quality and speed make everything else easier. Sean's work has directly enabled sales, product momentum and provided stability when it was needed most. — *Performance review*

As **Lead Developer** I was the team's go-to Python expert. I led quality control for all Python projects: dev env, linting, CI/CD. I provided the team with best practices for Python testing and code design. I contributed to the team's culture: helped distil our [engineering values](#), overhauled our hiring and [onboarding](#), and led workshops (for example [on code review](#)).

As **Senior Developer** I played a pivotal role in the evolution of the Hypothesis architecture. I investigated complex issues such as [syncing Postgres to Elasticsearch](#), implemented solutions, and documented designs. I set a high-bar for code quality while still iterating and delivering. I kept the codebase modern and engaging for newcomers for over a decade.

Open Knowledge Foundation

2011-2015

Senior Developer & Technical Training Lead

As a core committer to [CKAN](#), the world's leading open source data portal, I delivered major features including [Mozilla Persona support](#) and [broken link checking](#). I led client projects including [Data Packager](#) and [publicdata.eu](#). I overhauled CKAN's documentation, writing the [testing guidelines](#), [documentation guidelines](#), [API guide](#), [extending guide](#), [theming guide](#), and [contributing guide](#). I delivered workshops, for example on [open data licensing](#).

As **Technical Training Lead** I created the Open Knowledge Foundation's web development training course, trained the other trainers, and delivered trainings to clients including the Humanitarian Data Exchange, DKRZ.de, and the UN Environment Programme.

Sean is unfailingly enthusiastic and excited ... He is well liked by all, displays professionalism, initiative, passion and commitment to our work and has delivered outstanding service to us. We have enjoyed working with him tremendously.

— *Gavin Chait, Commercial Team Director, Open Knowledge Foundation*

What I can do

back-end code & architecture

- PYTHON
- SQL, POSTGRESQL
- ELASTICSEARCH, RABBITMQ
- API DESIGN
- CODE DESIGN
- TESTING

values-driven technical leadership

- TEAM LEADERSHIP
- ENGINEERING MANAGEMENT
- TRAINING, TUTORING, MENTORSHIP
- PROJECT MANAGEMENT
- PROCESS IMPROVEMENT
- OPEN SOURCE CONTRIBUTOR

developer experience & code quality

- TESTING
- LINTING
- CI/CD
- DEVELOPER ERGONOMICS
- WORKFLOWS
- VERSION CONTROL (GIT)
- CODE REVIEWS

full-stack fluency

- TYPESCRIPT
- JAVASCRIPT
- REACT, PREACT
- HTML, CSS, RESPONSIVE DESIGN
- USABILITY
- AWS, CLOUDFLARE, MONITORING
- IOS, JAVA, OBJECTIVE-C, C++, BASH

communication, synthesis & impact

- PUBLICATIONS
- BLOG POSTS
- PRESENTATIONS
- TUTORIALS
- WORKSHOPS
- RESEARCH

Click-East Research Project

2010-2011

Lead Developer

I taught myself Objective-C and iOS development to deliver an iPad app for children with autism ([BBC News article](#), [YouTube video](#), 100K downloads as of March 2014). I mentored students who contributed code and artwork for their BSc and MSc projects and worked with actors to record voice samples. I co-authored a [research paper about the app](#).

Sean has proven himself to be a committed, hard-working, creative and efficient programmer. We have met a number of challenges during the project, which might have been fatal to the work, had Sean not been so willing and able to learn new skills and find innovative ways to overcome them. Sean has demonstrated considerable skills as a collaborator, translating his technical knowledge into accessible language for his colleagues ... He has worked closely with animators, managing a potentially awkward relationship sensitively and effectively. He has also co-supervised a pair of undergraduate project students, expertly guiding their contribution to the game. I cannot recommend Sean highly enough, both for his professional abilities and personal demeanour. — *Dr Sue Fletcher-Watson, University of Edinburgh*

The University of Edinburgh

2005-2010

Java Programming Lecturer

I taught an intensive crash course in object-oriented programming with a diverse cohort of international students, ultimately becoming **course lecturer with final responsibility for 70 students**. I redesigned the course to use a "flipped" classroom approach, creating [screencasts](#) that became the primary course materials. I also tutored Computer Science 1 & 2.

The Forest Arts & Events Project

2005-2011

Volunteer & Organiser

I contributed to day-to-day operations and long-term strategy: organised events, ran workshops, facilitated meetings, mentored volunteers, provided website and tech support.

Macadamian Technologies

2004-2005

Developer

The University of Edinburgh

2003-2004

Computer Programming Tutor

Education

The University of Edinburgh

2005-2011

PhD in Human-Computer Interaction

I designed, implemented and evaluated a [story authoring app for children](#), conducted usability studies in schools with more than 60 children, worked with teachers and creative writing experts, and published a [PhD thesis](#) and two [conference papers](#).

The University of Edinburgh

2000-2004

BSc (Hons, 1st Class) in Computer Science

[Created a 3D game](#) in C++ and a P2P filesystem in Java. Microsoft award for 91% final grade.

North Tyneside Further Education College

1998-2000

A-Levels in Computer Programming, Physics & Maths

Final project grade: 98%. Turbo Pascal!