

# Braden Marshall

SOFTWARE ENGINEER · FULL-STACK WEB AND MOBILE ENGINEER

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## Summary

**Software engineer** passionate about solving **meaningful problems**, with speed, by leveraging **open-source** technologies on top of a concrete foundation of **Computer Science** principles. Proponent of **Lean** methodology and the **pragmatic** attitude it encourages.

## Experience



### Theodo UK

WEB AND MOBILE SOFTWARE ENGINEER

London, England

Aug. 2017–PRESENT

- Built and launched 10+ web and mobile apps (React, React Native, Redux, Node, AWS) using Agile methods (Lean, Scrum and DevOps), for billion dollar companies and Series A startups alike, including work on e-commerce platforms, data visualisations, machine learning algorithms and chatbots.
- Led and completed the first project migration to Typescript at Theodo. This experiment grew our team's velocity from 7.5 to 15 in 4 weeks. Delivered company-wide trainings on Typescript and drove the migration process that led to Theodo adopting Typescript for all new projects.
- Contributed several fixes and features to our internal project generator, most notable of which would spawn a React app hosted on AWS S3 utilising CloudFront and Certificate Manager for SSL (infrastructure as code via Terraform).
- Onboarded and trained, in both project tech-stack and methodology, ~10 junior and ~10 experienced developers.
- Led Scrum meetings on all projects, i.e. backlog refinements, technical grooming, and sprint planning.



### Theodo France

WEB AND MOBILE SOFTWARE ENGINEER

Paris, France

Oct. 2017 - Jan. 2018

- Travelled and lived in Paris, within one of Theodo's sister startups, and built the *session replay tool* for Content Square, one of the world's fastest growing *digital experience platforms*.



### Self-Employed

VIDEO-GAME MOD DEVELOPER

Horsham, England

Sep. 2013 - Jan. 2016

- Developed 11 "plug-and-play" addons, for the popular video-game Garry's Mod. Including: HUDs, scoreboards, leveling systems, administrative systems and mini-games.
- Marketed and sold over 1,000 units to server administrators (exposing my addons to 100,000s of players).
- Collaborated with clients to design and build *bespoke addons* for their own communities.
- Provided support to many clients, with varying levels of technical expertise.



### Cardiff University

CUROP RESEARCH ENGINEER

Cardiff, Wales

Aug. 2015 - Sep. 2016

- Co-authored a paper on Argumentation Theory (an AI field) as part of Cardiff Undergraduate Research Opportunities Programme (CUROP).
- Paper was accepted for inclusion in the International Conference on Computational Models of Argument (COMMA) 2018.
- For more, see: <http://disco.cs.cf.ac.uk/> and <http://ebooks.iospress.nl/publication/50220>

## Education



### Cardiff University

B.Sc. IN COMPUTER SCIENCE

Cardiff, Wales

Sep. 2014 - Jun. 2017

- Achieved **First-class** with honours (~85% marks achieved).
- Final-year modules include: Artificial Intelligence, Graphics, High-Performance Computing & Multimedia.
- Dissertation: a modern browser-based multiplayer implementation of the arcade game Tron; complete with a sophisticated AI powering "computer" controlled opponents.



### The College of Richard Collyer

GCE ADVANCED LEVELS (A-LEVELS)

Horsham, England

Sep. 2012 - Jun. 2014

- Computing (**A\***).
- Information Technology BTEC Level 3 (**Distinction\***, **Distinction\***).
- Mathematics (**B**).
- Received the Collyer's Academic Progress award following nomination from Computing teacher for exceptional performance.

## Side Projects

**Icarus:** a tiling windows manager, featuring gaps, created for MacOS. Implemented, following the *object-oriented* paradigm, using a *binary space partitioning tree* plus custom algorithms for efficient querying and layout computations. Can also manage other interfaces to a GUI, such as the DOM of a web-page.

**BradensPoon:** enables MacOS users to create new Terminal windows by dragging a selection box over the screen. Published a technical article detailing how it was built, which got over 1,000 upvotes on on Reddit.

**TWERK:** an administrative addon for Garry's Mod, a popular video-game, featuring: a sophisticated GUI; user groups with permissions; powerful user commands; as well as rich plugin and theme systems.

**Audio Synthesiser:** GUI application built with MATLAB implementing several *audio-signal processing* algorithms (including *spectrogram editing*, *phase vocoder*, *ADSR volume shaping*, *wah-wah*, *flanger* etc). Effect pipeline allows for some powerful creations.

## Skills

### Programming

JavaScript, TypeScript, Python, Lua, Java, MATLAB, SQL, C++.

### Frontend

React, Redux, Styled Components, React Native, D3.js, HTML5 & CSS3.

### Backend

Node (w/ Express + Knex, Loopback etc), Django.

### DevOps

AWS, Docker, Circle CI, Linux, Firebase.

### Other

Git, Test-Driven Development (w/ Jest, Cypress, ESLint etc), Algorithms & Data Structures.

## Hobbies

Bodybuilding, entrepreneurship, and \*NIX customisation.