Tyler McAndrew

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Profile

Second-year Computer Science (Data Science and AI) student at the University of Dundee, seeking a year-in-industry placement in software development/design. I build working software outside of my coursework, most recently an iOS audiobook app that I built in React Native and implemented a pivot into native Swift. Comfortable across several languages.

Education

University of Dundee — BSc (Hons) Computer Science (Data Science and AI)

2025 – 2030 (expected) · currently in second year

- Relevant modules: Introduction to Artificial Intelligence and Machine Learning; programming in C & C++
- Seeking a year-in-industry placement as part of the degree

Projects

Fraudible — iOS audiobook app · Swift, React Native, Expo

- Designed and built an audiobook listening app for iPhone as a personal project Built the first version in React Native with Expo, then rebuilt it as a native Swift app for better performance and closer integration with iOS
- Managed the full project myself, from the original design through the platform migration

3D virtual tabletop (two-person team project) · Web, Cloudflare Workers

- Co-developed a free, browser-based 3D virtual tabletop for running tabletop role-playing games online: players build dungeons from 3D tiles, place miniatures and roll dice together
- Built the health system that tracks and updates each character's hit points during play which is controlled by the “Dungeon master”
- Created some animations on the board itself, bringing the miniatures and in-game actions to life
- Deployed and live on Cloudflare Workers

Personal portfolio website · TypeScript, Next.js, React, three.js, Tailwind CSS

Designing and building an interactive 3D portfolio site, where visitors navigate by driving a car down a road and choosing a lane at a UK-style motorway gantry sign

Wrote a custom three.js scene engine with animated camera moves, day and dusk lighting, 3D models and a fallback for browsers without WebGL

Built a 3D construction-yard projects page with animated "blueprint" cards, plus page transitions and asset preloading so navigating between pages never waits on the network

Respects accessibility settings such as reduced motion, and is version-controlled on GitHub

Technical skills

Languages: Swift, TypeScript, C, Python

Frameworks: React Native, Expo

Tools and environments: Linux, Git and GitHub, VS Code, Xcode

Concepts: functional programming (closures, higher-order functions), mobile app development, introductory machine learning

Soft skills

Teamwork: co-developed a 3D virtual tabletop in a team of two, owning the health system and board animations while integrating with my partner's work

Self-motivation: started and maintain Fraudible and my portfolio website independently, alongside full-time study

Adaptability: moved Fraudible from React Native to native Swift partway through, learning a new language and platform to do it

Attention to detail: built authentic UK road signage into my portfolio and made it respect users' reduced-motion settings

References

Available on request.