Thomas Taylor

web application architect

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About

Web application architect with over 10 years professional experience leading development on engaging, user-centric products. Currently working on a global open-source digital learning project, but always on the look-out for exciting new opportunities.

I love solving big problems with simple, elegant and well thought-out solutions, and thrive on the challenge of using new technologies to develop engaging products that put the user at the heart and give enjoyment in simply being used.

I have considerable experience in leadership roles both from a technical perspective heading up small development teams, and from a cross-discipline product ownership standpoint in coordinating the entire product development process from initial conception through to release and client support. I pride myself in my ability to develop lasting respectful relationships with my clients and team; a strong team bond has always been at the heart of my greatest successes.

Skills

Web development: JS (ES6+, Node.js, React), NoSQL (MongoDB), HTML, CSS (with LESS), automated testing & TDD (CasperJS, Mocha), CI (Travis), hosting (Linux, Heroku, Amazon).
Misc: Requirements analysis, specification definition, software architecture, product ownership, project management, VCS (Git, Subversion), document preparation (LaTeX).

Hobbies & Interests

User experience, digital learning, ethical software practices, clean code*
Black coffee, photography, Japan, Leicester City F.C. fitness, PEZ, The Rebel Alliance.

Education

2008–2012 **Bachelor of Science** – *University of Brighton, East Sussex.*

Computer Science (Games) *with first-class honours.*

Major project: Exploration of academic machine learning techniques in a game context. Developed for iOS 4 using Obj-C and Cocos2D. *Source code at* **github/taylortom/cogito**.

Modules studied: Concurrency and Client-Server Computing, Advanced AI, Computer Graphics Algorithms, Object-Oriented Software Design, Computer Systems Architecture, Mathematics, Human Computer Interaction, Requirements Analysis.

2006–2008 **A-level** – *Wreake Valley Community College, Leicestershire.*

A2: Graphics with Materials Technology (A), English Literature (B), Biology (C)
AS: Chemistry (C), General Studies (C).

2004–2006 **GCSE** – *Wreake Valley Community College, Leicestershire.*

Mathematics (A), Double Science (AA), English Literature (A), English Language (B), I.T. (A), Business & Communication Systems (A*), Business Studies (A), Graphic Products (A), R.E. (A), Music (B), French (B), German (C), Humanities (A).

*No guarantees made.

Professional Experience

Jun 2019 – Present

Open-source Senior Technical Architect – *Kineo*

Role as a lead developer on the Node.js-based Adapt authoring tool

Open-source Learning Technologies Developer: Oct 2014 – Jun 2019

I lead the development and product ownership both on the FOSS Adapt project and at Kineo. This means driving the roadmap and architecting new features/core changes, organising meetings, liaising with and managing contributors, and the development of features/bug-fixes. Internally at Kineo, I'm also regularly involved in proposal-level meetings to discuss requirements with clients, as well as maintaining client installs on our Linux servers.

Community engagement is another major aspect to my role. I am involved in on-boarding and training both internal and external staff, organising and presenting at community events and directly engaging the community to garner feedback and drive new feature development. This community aspect to my role is very important to me, as I get to have a unique relationship with our end-users.

Personal accomplishments

- Re-architected the authoring tool Node.js app, which involved identifying areas of weakness, proposing and documenting solutions, and implementing those solutions.
- Formalised Adapt's development workflow (based on elements of Agile & git flow). Also involved documenting 'rules', and enforcing these with CI tools where appropriate.
- Led Kineo's adoption of the Adapt authoring tool internally, which required considerable development work as well as both internal and external knowledge-sharing.

I get much enjoyment out of working on the Adapt project, due in part to its ethical core principles, but also the satisfaction of working on a product that's both valued by its users and also forcing a change in the learning industry as a whole.

Jul 2012 – Oct 2014

Technical Consultant – *Kineo*

Role as an ActionScript 2/3 and later JavaScript developer working on digital learning courses for many high-profile private and public sector clients.

Junior TC: Jul 2012 – May 2013

Placement Student: Jul 2010 – Aug 2011

I was responsible for many client projects, from the requirements analysis and solution architecture to development and bug-fixing. I developed an ability to thrive under high pressure during this role due to our usually very short development cycles.

My greatest accomplishment in this role was to architect and build a complex data-visualisation widget using HTML5 and Canvas in an award-winning flagship project for City & Guilds. A significant part of this task was the R&D and subsequent identification of appropriate technologies and tools, which weren't used at all by the development team at the time.

Code examples

Adapt authoring tool

Key areas: app architecture, problem solving, software lifecycle
Tech used: Node.js, MongoDB

A web-based authoring tool for the open-source Adapt elearning project, of which I am a lead developer.
Starting in 2020, I undertook a complete redesign and rearchitecture of the codebase with a focus on modernisation, customisability and extensibility. I lead the entire development process, from identifying the problem areas and scope of the project, through to development and testing/bug-fixing. I also built a set of CI integrations for simplifying development workflows, testing and documentation generation. Development was completed in Q1 2023.

Source: github/adapt-security/adapt-authoring, **documentation**: Docsify/ESDoc, **supporting docs**: GitHub

Home smart display

Key areas: UX, front-end
Tech used: Node.js, React

A Node.js/React-based web-app home 'smart' screen, which displays a variety information widgets such as events, news, smart-home devices and weather. The Node.js back-end hosts an API which serves the app, and the UI is fully customisable via config.

Source: *Hosted in a private repository, available on request.*

Static website generator

Key areas: input/output, CLI, app architecture
Tech used: Node.js

A Node.js-based CLI for generating simple static websites (used for my personal website). The site content is written in markdown and handlebars and styled with LESS. This is all boiled down by the CLI into static HTML pages with CSS.

Source: github/taylortom/staticsite-cli, **output example**: tomtaylor.name

Card sort

Key areas: UX, front-end
Tech used: Node.js, Handlebars

A simple web-app for online card sorting activities. Has a drag and drop interface courtesy of interact.js, and basic state saving via local storage.

Source: github/taylortom/card-sort, **demo**: code.tomtaylor.name/ls/card-sort

References

Available on request.