

# Kit W. Thornton

FULL STACK SOFTWARE ENGINEER

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## Summary

With an excellent academic record and a wealth of experiences from full-stack development to ultra marathon running, I can confidently take ownership of a project and bring the best out of my peers. I am now actively seeking a full-stack developer role in an agile company that makes a positive impact on the world.

## Education

### University of Bath

MENG (HONS) IN AEROSPACE ENGINEERING

Bath, UK

Sept. 2014 - June 2019

- Degree: First Class Honours
- Thesis: Mathematical modelling of complex aerodynamic behaviour, First Class

### Bromsgrove School

A LEVELS & GCSEs

Bromsgrove, UK

Sept. 2010 - June 2014

- A Levels: Mathematics A\*, Physics A\*, Further Mathematics A, Chemistry A, French A (AS Level)
- GCSEs: 10 A\*s and 1 A. Including Mathematics, French, English and three sciences

## Professional Skills

- .NET** ⇒ I have used .NET Core extensively for more than two years and in that time have created several web applications in personal and professional contexts using both MVC and Web API. Recently I have been creating ASP.NET REST API projects that communicate with a database alongside React.js front end apps.
- C#** ⇒ C# has been my go-to back-end language for over two years. I love being able to apply core OOP principles to applications which ensure that my code is versatile and maintainable. I have knowledge of *LINQ*, *AJAX* and *Web Services*.
- React** ⇒ Having used React.js for over a year, I'm always improving through studying of patterns and core principles alongside building beautiful UIs. I use *Redux* to manage and centralise state to create scalable and maintainable apps.
- SQL** ⇒ I became a key member of the Database Guild at FNZ through my proficiency in *Microsoft SQL Server*. I have also used *Azure Data Studio* and *PostgreSQL* to write and optimise stored procedures, functions and triggers. I've created complex DB architecture for financial systems alongside monitoring code releases through platform performance investigations.
- Node.js** ⇒ I have used Node.js as the back-end for different project for over one year. I regularly use Node.js to communicate with *PostgreSQL* DBs and utilise a *ReactJS* front-end.
- DVCS** ⇒ I have used Git for two years in personal and professional projects and am familiar with the core operations.
- Testing** ⇒ *NUnit* and *xUnit.net* are my go-to unit testing libraries when using *.NET Core*. I'm familiar with integration testing and have recently explored *Jest* for testing my React apps.
- Python** ⇒ I'm familiar with data manipulation techniques and data science packages including *pandas*.
- Agile** ⇒ I have worked in an agile development setting since Jan '20 where I enjoy the versatility and efficiency of working in scrum teams. I can also accurately size stories, aid management in sprint planning and conduct retrospectives.

## Experience

### Freelance Web Developer

Warwickshire, UK

EXHALL AND WIXFORD CRICKET CLUB

Sept. 2021 - present

- I am undertaking a project to create a statistics website for a cricket club. This has included creating the entire project architecture using **GIT for version control**. The website will be hosted on a public domain in December 2021 using **AWS**.
- Firstly, I created the **DB architecture in PostgreSQL** which included using **Boyce-Codd normal form** to minimise data redundancies. I have written functions and stored procedures to create a Data Access Layer (DAL) whereby I can obtain data by team, season, player and other parameters.
- I have then used **NodeJS** with **Express.js** and **node-postgres** to query the DB and contain business logic. I then integrated a ReactJS front-end to allow communication between the DB and UI. I then used CSS frameworks such as **React-Bootstrap** and **Recharts** to create a UI whereby key statistics could be viewed and the site navigated seamlessly.
- This project has taught me the value of being **self-disciplined** and ensuring that the I continually make progress. I have used project management software **Zoho** to keep on top of tasks, milestones and issues through the use of a Kanban board.

## Freelance Web Developer

DIGIWORKZ

Warwickshire, UK

June 2021 - present

- As part of Digiworkz' campaign to increase the user engagement of their online platforms I created and hosted a 10-page site using HTML, CSS, JS which can be accessed here: <http://www.insights.digiworkz.com/home>. Managing client expectations and other projects was a challenge that I relished in this role. I learned a great deal about front-end development and web hosting.

## FNZ Group

GRADUATE SOFTWARE DEVELOPER

Brno, Czech Republic

Sept. 2019 - May 2021

- I worked as an all-rounder who **analysed required system changes, designed databases, wrote complex financial business logic and created slick web applications.**
- My responsibilities included building new platform features in-line with the client requirements and also defect fixing to ensure that the platform runs smoothly. These tasks included anything from an hour's work to a week's depending on the scope of the task. The frameworks I use are **.NET Core** and **ASP.NET** with the primary back-end languages I use are **C#** and **VB.NET**. The front-end languages/packages I used were React.js and Bootstrap which I found extremely exciting! Finally, I use Microsoft SQL Server in the capacity of writing and optimising views and stored procedures alongside querying including joins, defining relationships, indexes and automated actions.
- I **work closely with testers and other members of the project team** to produce efficient software enhancements. Therefore, I have studied financial and business logic extensively and undertaken industry-specific training.
- I worked in an Agile team under SCRUM methodologies. I aided in planning and sizing sprints through estimating the time taken for specific developers to complete tasks. I enjoyed this side of development as it taught me a significant amount about management and sprint planning.

## University of Bath

MASTERS YEAR

Bath, UK

Sept. 2018 - June 2019

- The course was a combination of fluid dynamics, computational modelling and engineering processes. In my masters year I was able to focus on computational modules allowing me to explore areas such as Computational Fluid Dynamics (CFD), Particle-Image Velocimetry (PIV) and large-scale vector mechanics. I used primarily Python and Matlab for these studies.

## Projects

### Convert That Climb

WWW.CONVERTTHATCLIMB.CO.UK

London, UK

September 2021

- This site allows the user to convert between multiple different rock climbing grades with ease. Equivalent grades can be compared for both route climbing and bouldering alongside useful information about the history of each grading system.
- Simply put, the front-end app, written in React with Bootstrap and CSS styling, communicates with a RESTful API, hosted on Heroku, and retrieves data from the PostgreSQL database. The front-end app utilises Redux for state management in order to centralise the state and ensure that the app is well-written, easily maintainable and scalable. The back-end is written in Javascript using Node.js and is a lightweight API able to consume errors and handle multiple asynchronous requests from the app.

### Portfolio Website

WWW.KITTHORNTON.DEV

London, UK

November 2021

- This site is used as a portfolio for my work undertaken as a full-stack developer. The aims being that it will help showcase my work, increase client interactions and help me develop my front-end skills in the process.
- I used React, Bootstrap, CSS and a host of smaller packages to create this site. This project was particularly interesting as I placed a heavy emphasis on making the site responsive to ensure that the experience will be enjoyable both on mobile and laptop. I created a library of re-usable React components that provided a good foundation to ensure that the code was consistent, easily maintainable and any slight tweaks were easy and fast to deploy. I used GitHub to deploy straight to Netlify whilst using Netlify's built-in CI/CD pipeline. This ensured a fast development speed and increased the user testing I could perform.

## Other Interests

### Sports

I am a keen and capable sportsman and have played cricket, football, rugby and hockey for many years. I captained the 1st XI Hockey team and 2nd XI Cricket teams at school alongside competing regionally in both sports. I enjoyed partaking in inter-company football and rugby tournaments whilst at FNZ and cricket games whilst at GE Aviation.

### Travelling

I love to travel, experience new cultures and gain valuable life lessons and stories. Much of the money I earn working goes towards these experiences. I would love to do the Trans-Siberian railway next summer!

### Fitness

I have run several half and one full marathon in aid of different mental health charities. A group of friends and I have recently run an Ultramarathon around the coast of Jersey to raise money for the charity Mind.

### Languages

I am a confident french speaker and have progressed to B2 level through weekly lessons. I also know introductory German and am A1.

### Mountains

I am a passionate climber, hiker and mountaineer and enjoy exploring whichever country I am living. I have also completed winter and summer summits throughout the Alps and am always planning more adventures.