

Kyle Albert Software Engineer

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About Me:

I'm a highly adaptable and flexible Software Engineer with two years of industry experience based in Northwest London. I have an in-depth understanding of software development practices and their frequent trade-offs. I come from a scientific academic background in chemistry with a focus on computational quantum mechanics.

Within the software engineering industry, I have been exposed to many different technologies. I love expanding my technical knowledge. Techs that I have extensive experience in are **Typescript, C#, Next.js, React.js, Python, React Redux, Angular 17, NGRX, Node.js, Express, Flask, ASP.NET, NestJS, Stripe API, Passport JWT, Microsoft SQL Server, MongoDB, Nginx, Azure, AWS with CDK, CI/CD pipelines with GitHub Actions and Docker.**

A software engineer is always learning and I spend much of my spare time exploring new topics. Some of the areas that I have found most interesting:

- **Rust with WASM**, incredible to see system software's migration to the web.
- **AWS infrastructure:**
 - **Lambda** with serverless architecture, **EC2** with **nginx** as reverse proxy to **VPC**, **Conginto** with **OAuth2** protocol, **ECS** with dockerized containers, **Route 53** for DNS configuration, **RDB** for **Postgres** and **DynamoDb** document-based serverless database.
- **OpenAi API**, integrating Chat-gpt clients into the server and serverless architecture for client-side interaction with custom configured AI model.
- Client-side frameworks creating new applications with **Next.js, Svelte Kit, TailwindCSS** design pattern and **Angular** with a focus on **RxJS**'s declarative programming style and focus on functional method chaining.
- Server Side frameworks such as **Spring Boot, ASP.NET, Socket.IO, Golang** and **NestJS** offer a range of services such as sessions based chat room websocket API.
- Reading Programming Books
 - **You Don't Know Javascript series** ~ Kyle Simpson
 - **Design Patterns: Elements of Reusable Object-Oriented Software** ~ Erich Gamma, John Vlissides, Richard Helm,
 - **Terraform Up & Running** ~ Yevgeniy Brikman
 - **Refactoring UI** ~ Adam Wathan and Steve Schoger

Education:

Durham University

2018 – 2021

BSc Chemistry - Upper Second Class Honors, with modules in Core Chemistry, Computational Chemistry, New Venture Creation, Advanced Organic Chemistry and Practical Chemistry.
Burford Secondary School

A-Levels

2017

A in Maths, A in Chemistry and C in Biology.

GCSE

2015

A* in Maths and English Language

Work Experience:

Heat Engineer, Witney/Remote - Software Engineer

04/2023

A company in its growth phase tasked with designing and maintaining a web based application with a client built in **Angular 17**, with **NGRX** redux state management, an **IOS** client written in **Objective-C** and an android client written in **Java** and **Kotlin** interacting with **AWS EC2** services built with **Express, NestJS, Flask** with **Python**, **AWS** client integration with **S3** bucket providing the end user system of surveying building dimensions, materials and 3D dimensional scans configured with **THREE.js** wrapper with **WebGL** which provides a base for the automating of a Buildings Heat Loss Report.

A programmer is more than the technology they have used. In my time in the industry, I have implemented and solved universal software based problems.

Modules of the codebase that I have implemented in my current position:

- **Users** with roles and calculated permissions
- **Authentication** using JWT with a designed permission middleware.
- **Payment** with Stripe API.
- **Scientific Based Business Logic** which required the conversion of an Excel sheet into pure methods to be served to web clients.
- **API design pattern** for a frontend service layer with a redux based state management with a localStorage service, rest and WebSocket server architecture.
- **Infrastructure** deploying EC2 instance into AWS, configuring MongoDB Atlas clusters using terraform, writing yaml based CI/CD pipeline with GitHub Actions to automate the deployment of development, staging and production branches and automation of testing with code quality on Pull Requests plus merges to main.

In my current role I have also gained experience in nontechnical skills.

- **Technical Interviews**, I was tasked with creating a multi round interview. This required creating technical interview questions to evaluate a candidate's Javascript knowledge and the creation of a take home second round consisting of the creation of a rest server client architecture.
- **Creation of Documentation** consisting of Business Terminology in context with User defined roles and interaction with a service based architecture.
- **Sprint Creation** with defining and tracking task progress.
- **Paired Programming** with senior and junior engineers.

Dispace, remote work – Software Engineer

09/2022 – 04/2023

During my time at Dispace as a software engineer, I had the opportunity to contribute to the building of a web application that services the event management sector. The application was built using various technologies such as **Typescript, React, APS.NET, Microsoft SQL Server**, and **Azure** cloud platform. The development team operated in an agile environment with bi-weekly sprints.

Another achievement that I made was introducing style templates with documentation to the codebase to improve its readability. The templates I introduced helped to standardize the coding style of the application, making it easier for other developers to understand and work with the codebase. This improved the overall quality of the codebase and allowed the team to work more efficiently.