

JONATHAN WATSON

JUNIOR SOFTWARE ENGINEER

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Summary

Highly motivated Junior Software Engineer at Swiss Precision Diagnostics with experience in mobile and web development. As a passionate lifelong learner and an excellent problem solver, I actively seek new challenges and continually strive to improve my software development skills. I am a team player who thrives in collaborative settings, consistently contributing to team success through clear communication, strategic thinking, and working towards finding the best solutions to complex problems.

Technical Skills

Languages: JavaScript | TypeScript | C#

Front-end: React | Next.js | HTML | CSS | Tailwind CSS

Back-end: SQL | Node.js

Testing: Jest | React Testing Library

Miscellaneous: Git | Agile | Jira | Test Driven Development (TDD) | Microsoft Azure | .NET

Experience

Junior Software Engineer

Aug 2023 – Present

Swiss Precision Diagnostics, Bedford

- Assisted with developing a new flagship on-device machine learning powered mobile application for Android and iOS that uses a machine learning model in combination with a device's camera feed to identify objects within the frame.
- Optimised performance bottlenecks within the new mobile application, reducing the average inference time per frame from 150ms to 30ms, significantly improving usability, and enhancing the overall user experience.
- Updated and improved customer-facing web applications by resolving defects, enhancing performance, and implementing new features.
- Integrated the new mobile application with existing back-end services.
- Implemented various new back-end REST API microservices using serverless Azure Functions.
- Focused on writing clean, reliable, and maintainable code to a high standard to ensure regulatory compliance within the medical devices industry.
- Worked within a cross-functional team responsible for gathering requirements, planning, designing, and implementing new software features.
- Collaborated with senior developers and the QA department to troubleshoot and resolve software defects.
- Assisted with training and deploying new machine learning models to improve the overall performance and accuracy of the new mobile application.

Trainee Software Engineer

Feb 2023 – May 2023

Northcoders, Manchester

- Industry-leading full-stack software engineering bootcamp with a strong emphasis on software development fundamentals and industry best practices.
- **Front-end project:** A news web application that displays fictional news stories retrieved from the back-end project. It was built using React, Tailwind CSS, React Router, and Create React App.
- **Back-end project:** A REST API that sends user data and news stories in JSON format. It was built using Express.js and PostgreSQL and tested using Jest/SuperTest.
- **Group project:** A bill-splitting mobile application built for Android and iOS using React Native, Firebase, Redux, and Tailwind CSS.

Medical Leave/Software Development Studies

Nov 2019 – Feb 2023

- Following a severe accident, I was no longer able to continue working and was left waiting a long time for the treatment I needed due to the pandemic.
- Decided to pursue a long-held interest in software development and aimed to transition to a new career in the field.
- Focused on learning to code through self-study, structured online courses, and hands-on projects.
- After surgery and intense physiotherapy, I had recovered well enough and could return to full-time work.

Guitar Tutor/Sound Engineer

Dec 2016 – Nov 2019

Self-Employed, Bristol

- Worked with students across a range of diverse skill sets and created tailored learning plans and practice routines to help them achieve their goals.
- Offered various sound engineering services to clients, including recording, mixing, and mastering.
- Being self-employed meant being motivated, organised, resourceful, and a self-starter was essential.
- Managed many students, which required multitasking, prioritising, and managing time effectively.

Office Administrator

Apr 2014 – Dec 2016

NHS, Glastonbury

- Managed the reception area, which included general administrative tasks and support operations in a fast-paced hospital environment.

Education

MSc Computer Science

Nov 2025

University of York – York

BSc Biology

Jul 2009

Bath Spa University – Bath, UK

Software Engineering Bootcamp

May 2023

Northcoders – Manchester, UK

Projects

Personal Portfolio ([Site Link](#), [Repository](#))

A personal portfolio website built to demonstrate my web development skills and showcase my other projects.

- It features a sleek, modern design with rich animations and is optimised for desktop and mobile viewing.
- Built using TypeScript, React, Next.js, and Tailwind CSS.

E-Commerce Store ([Site Link](#), [Repository](#))

An e-commerce storefront that sells computer hardware. Users can browse various categories, view products based on real-world data and add/remove products from their basket.

- Passport.js handles user authentication, enabling users to easily create an account, update their personal information, and change their password.
- Session cookies keep users logged in, so they don't have to sign in every visit.
- Utilises a PostgreSQL database hosted on Amazon Web Services.
- Extensively tested using a combination of unit and integration tests with Jest and React Testing Library.
- Built using React, Next.js, Redux, Styled Components, PostgreSQL, and Prisma.

NC News ([Site Link](#), [Repository](#))

A news web application that displays fictional news articles retrieved from a custom REST API.

- Users can filter the various articles by selecting a topic.
- Articles can be sorted by date, comments, or likes.
- Each article has its own dedicated page where users can like the article and leave a comment.
- Built using React, Tailwind CSS, React Router, and Create React App.
- The back-end API was built using Express.js and PostgreSQL.