

Karolina Balszan

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EDUCATION

University of West London

BSc Computer Science (**First Class Honours**)

London, UK

May 2024

COURSEWORK

Final Year Project | Java, Spring Boot, RabbitMQ

Grade: 83%

- Designed and implemented **microservices** architecture using **Spring Boot**, **Java**, and **RabbitMQ** to process large-scale order data, integrating LMAX Disruptor for parallel processing and achieving 77.49% reduction in processing time for volumes up to 10 million orders

Team Leader: E-commerce Website Development | Shopify

Grade: 77%

- Led a 5-person cross-functional team in developing a e-commerce platform as a part of group project, implementing agile methodologies with weekly sprints to manage UX design, back-end development, and QA processes

Applied Software Engineering | Java

Grade: 80%

- Developed a back-end application for a knowledge management system using **Java**, implementing a modular architecture and object-oriented design principles to enable easy system expansion and maintenance
- Implemented comprehensive unit testing using **JUnit** within a test-driven development (**TDD**) framework

Databases and Analytics | Python, SQL, MongoDB

Grade: 69%

- Designed and implemented **MongoDB** schemas for NoSQL applications, performing CRUD operations
- Utilised **SQL** and **Python (NumPy, Pandas)** to analyse datasets and improve data efficiency

PROJECTS

FoodShop | JavaScript, React.js, Next.js, Tailwind CSS, Zustand, Stripe API

foodshop.balszan.dev

- Developed and deployed a full-stack e-commerce application using **React** and **Next.js**, combining frontend and backend functionality
- Implemented state management with **Zustand** and integrated **Stripe API** for secure payments
- Created a dynamic cart system and responsive design using **Tailwind CSS**, optimising cross-browser compatibility and performance across various devices
- Applied best practices including server-side rendering and client-side state management, enhancing application performance and SEO

BirdCheck | HTML, CSS, JavaScript, React.js

birdcheck.netlify.app

- Developed and deployed a **React**-based application fetching and displaying recent UK bird sightings using eBird and Flickr **APIs**
- Implemented interactive Leaflet maps to visualise bird spotting locations
- Utilised localStorage for persistent storage of user data
- Ensured W3C validation standards and incorporated accessibility best practices

EXPERIENCE

Self-Employed Childminder

2021 - Present

- Managed multiple clients and provided professional childcare services, ensuring high-quality care and development activities

TECHNICAL SKILLS

Languages: JavaScript, Java, Python, SQL

Frameworks & Libraries: React, Node.js, Express.js, Next.js, Spring Boot

Databases: MongoDB

Developer Tools: Git, VS Code, IntelliJ

Other: HTML, CSS, Tailwind CSS, Zustand, Webpack, RabbitMQ