

# DUDLEY SPENCE

## SOFTWARE ENGINEER

### CONTACT



+33 7 45 39 75 27



[dudleyspence5@gmail.com](mailto:dudleyspence5@gmail.com)



[www.linkedin.com/in/dudleyspence](https://www.linkedin.com/in/dudleyspence)



[www.dudleyspence.com](http://www.dudleyspence.com)



Annemasse, France



<https://github.com/dudleyspence>

### EDUCATION

#### MSc Computer Science

University of Liverpool



Sept 2020 - Sept 2021



Distinction

#### BSc Chemistry with Medicinal Chemistry

Newcastle University



June 2016- Sept 2019



Upper Second-Class Honours (2:1)

### SKILLS

- Front-End Development: HTML and CSS
- Agile
- SCRUM
- Back-end Development
- Full-Stack Development
- JavaScript
- Python
- FastAPI
- Express.js
- PostgreSQL
- MySQL
- Object-Oriented Programming
- Node.js
- Test-Driven Development (Jest & Pytest)
- Git version control
- React
- Machine Learning
- Database and Information Systems
- Computational Intelligence

### PROFILE

I am a problem-solving enthusiast with a strong foundation in Software Development. I earned a distinction in my Master's in Computer Science, which solidified my programming skills and provided me with a comprehensive understanding of key development components.

After completing my degree, I took some time to travel and worked various temporary jobs to fund my journey. These experiences broadened my perspective, enhanced my adaptability, and reinforced my desire to pursue a career in software engineering.

To refine my practical skills, I completed the Northcoders software engineering bootcamp remotely from France, where I have been living temporarily. During the course, I gained full-stack development experience, including expertise in JavaScript, modern frameworks, and backend technologies.

I am eager to begin my career and am looking for opportunities internationally, particularly in Switzerland. As a dedicated professional from the UK, I am ready to contribute to a company that can assist with obtaining a work permit. My technical expertise, diverse experiences, and strong work ethic make me a valuable addition to any dynamic engineering team.

### PROFESSIONAL DEVELOPMENT

#### Software Engineering Student

Northcoders Software Engineering Bootcamp

Jun 2024 - Sept 2024

- Developed advanced skills in JavaScript through intensive hands-on projects and coding challenges
- Demonstrated strong data manipulation skills in JavaScript.
- Adopted test-driven development practices to ensure high-quality, maintainable code, leading to fewer bugs and more reliable software. This is also demonstrated in the above Github repository
- Improved my expertise in version control using Git and GitHub, facilitating seamless collaboration and code management in team settings
- Achieved proficiency in full-stack development, encompassing both front-end technologies (HTML, CSS, React) and back-end frameworks (Node.js, Express)

### SOFTWARE PROJECTS

#### TrailTalk

Fullstack Developer

July 2024

**Backend Development:**

**Node.js, Express.js, PostgreSQL, Supabase**

- Developed a RESTful API with Node.js and Express for efficient CRUD operations and dynamic client requests
- Utilised Test-Driven Development (TDD) with Jest for robust, high-quality code.
- Deployed and managed a cloud-based server and SQL database on Railway.

**Frontend Development:**

**React, JavaScript, HTML/CSS, Axios**

- Built a dynamic and responsive user interface in React, ensuring smooth integration with the backend API and adaptability across various devices and screen sizes.
- Leveraged Axios for efficient data fetching and CRUD operations, ensuring accurate and real-time communication with the back-end API.

## TRANSFERABLE SKILLS

- Communication
- Teamwork
- Leadership
- Peer reviews
- Collaborative mind set

## ACADEMIC PROJECTS

## Solving the N-puzzle using a Deep Q-Network

Software Developer June 2021

- Created a DQN using deep reinforcement learning
- Made use of new and industry leading training techniques such as 'experienced replay memory'

<https://github.com/dudleyspence/N-Puzzle-DQN.git>

## Research literature project: Allylation of Imines

Research Author	Jan 2019 - Jul 2019
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- Constructed an in-depth analysis of the research into stereoselective imine allylation reactions
- Considered the industrial use of catalysts, selected reagents and the right conditions in affording a desired amine or amide with high yields and stereoselectivities.

## INTERESTS

I have a passion for traveling and exploring the outdoors. Hiking is one of my favourite activities, as it allows me to connect with nature and challenge myself physically. Whether it's a short walk or a multi-day hike, I enjoy discovering new, exciting places and experiencing the natural world.

- Designed modular, reusable components following DRY principles, enhancing the maintainability and scalability of the application.
- Implemented dynamic routing with React Router to improve user navigation and ensure a seamless user experience.
- Utilised useContext for managing global states, effectively reducing prop drilling and improving the maintainability of the application.

**Backend Repo:** <https://github.com/dudleyspence/be-news-api>

**Frontend Repo:** <https://github.com/dudleyspence/TrailTalk>

**Live Website:** <https://trailtalk-production.up.railway.app/>

## TravelSync

## Fullstack Developer

In Development

### Backend Development:

Python, fastAPI, MySQL, SQLAlchemy

- Developed a RESTful API using FastAPI with SQLAlchemy for ORM and Pydantic for data validation, integrating MySQL for efficient data storage and retrieval in Python.
- Utilised models, routers, and schemas to create a modular and scalable architecture, enhancing code maintainability and clarity.
- Implemented the Google Places API to fetch location data, which was then processed and sent to the front end for display on Mapbox

### Frontend Development:

## React, JavaScript, Axios, FirebaseAuth

- Built dynamic, responsive user interfaces in React, integrating with Mapbox to display enhanced location-based features.
- Implemented dynamic routing with React Router.
- Integrated Firebase Authentication for secure user login and management.
- Continued independent development, adding new features, improving the user experience, and optimizing the site.

**Collaborative Development:** Worked in a 4-member Agile team using Scrum to develop the project's initial version over a 2-week sprint. (Links to group repositories are in the README of each solo repository)

**Individual Contributions:** Continued development independently, adding features, enhancing user experience, and optimizing the site.

**Backend Repo:** <https://github.com/dudleyspence/TravelSync-API-Extended>

**Frontend Repo:** <https://github.com/dudleyspence/TravelSync-FE-Extended>

**Live Website:** <https://travelsync-fe-extended-production.up.railway.app>

## WORK EXPERIENCE

## Forklift Operator

Ashahi Beverage Company Perth

Aug 2023 - May 2024

- Awarded Australian national quality champion for Asahi.
- Operated various forklifts with a focus on safety and efficiency.

## Tax Administration Clerk

HMRC - (Via Brook Street Recruitment Agency)

Oct 2021 - Mar 2022

- Digitised large volumes of paper tax returns, showcasing data entry skills and attention to detail.
- Handled taxpayer correspondence, demonstrating strong written communication and problem-solving abilities.

## Duty Manager

Ilkley Lawn Tennis & Squash Club Ltd

June 2019 - Sept 2020

- Provided excellent customer support and resolved issues effectively.
- Trained new employees to improve team performance.