

Benjamin Meadows

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Programming Experience

STUDENT CENTRIC TRAVEL PLANNING WEB APPLICATION (*SPRING BOOT, REACT, MYSQL*)

- Developed a full-stack web application to assist students with travel planning.
- Utilized React.js for the front end, Spring Boot for the back end, and MySQL for the database. Deployed to the cloud web server using Docker and Digital Ocean.
- Implemented technical TSP algorithms, third-party APIs to display routes on a map for users and JSON authentication for security.
- Utilized GitHub for Continuous Integration/Continuous Deployment (CI/CD) to streamline development and deployment processes.
- Achieved a first-class grade for the project.

SMART AI IOT DOORBELL CAMERA SYSTEM (*ARDUINO, PYTHON, FLASK, TINYDB, REACT*)

- Developed an IoT-based doorbell camera system to enhance home security as part of a development team.
- Utilized Python for camera sensor logic, AI facial recognition software and video data handling. I also orchestrated efficient data exchange between Raspberry Pi and Arduino.
- Implemented real-time video upload to a Google-hosted virtual server using Google Cloud, enabling live display on a website.
- Integrated automatic email delivery of captured videos to users, enhancing the user experience and providing immediate alerts.
- Utilized GitHub for version control, allowing for collaborative development in my group and easier troubleshooting.
- Achieved successful real-world deployment, demonstrating the system's reliability and effectiveness.

PERSONAL PORTFOLIO WEBSITE (*REACT, PYTHON, DJANGO, MYSQL*)

- Developed a personal portfolio website to showcase my previous work, skills, and experience.
- This is a full-stack application where I used React for the front end for a dynamic and responsive interface. I used Django a Python framework to develop a back-end which managed the routing and logic for my application and I connected to a MySQL database to handle data storage and retrieval.
- I also integrated RESTful APIs for seamless communication between the front end and the back end.
- I designed and deployed the website, demonstrating proficiency in full-stack development, database management and modern web technologies.

Work Experience

JUNIOR OPERATIONAL ANALYST - SECCL

May 2024 – Sep 2024

- Regulatory Compliance and Transaction Oversight:** Managed the transfer of tax wrappers between accounts, ensuring full compliance with HMRC laws and regulations. Utilized company systems to execute transactions accurately and efficiently.
- Process Automation:** Leveraged Python and MongoDB to develop custom software tools that streamlined internal processes. Queried MongoDB databases to extract critical information, which was used to automate workflows, significantly enhancing efficiency and reducing manual errors.
- Cross-functional collaboration:** Actively participated in meetings with software engineers to advocate for system enhancements. Provided operational insights that guided the development of new features, improving departmental workflows and making tasks more efficient for the team.
- Problem Resolution through Technical Solutions:** Identified root causes of operational issues raised in problem tickets. Implemented effective software solutions using Python and MongoDB, leading to improved provider satisfaction and increased system reliability.
- Efficiency Improvements:** Achieved over 50% reduction in processing time through automation and software enhancements, optimising daily operations and contributing to overall team performance.

Education

Cardiff University, BSc Computer Science

2020 - 2023

- Key Modules: AI, machine learning, Discrete mathematics, database systems, object-oriented programming
- Grade: Achieved a high 2:1

St Peter's Sixth Form

2017 – 2019

A Level: Maths (B), Biology (B), Chemistry (B)

Skills

- Programming Languages:** Java , Python, JavaScript, HTML/CSS.
- Frameworks/Libraries:** React.js, node.js, SpringBoot, NumPy, matplotlib.
- Database:** MySQL, Tiny DB.
- Tools and technologies:** Docker, AWS, Raspberry Pi and Arduino, Git, GitHub.

Responsibilities and Achievements

1ST PLACE HACKATHON

April 2023 – April 2023

- Participated in a university-run hackathon over 3 days, tasked with creating a proof-of-concept for an app to improve waste management and sustainability within Cardiff and Newport.
- Created a fully-fledged prototype and received first place in the competition for our team's efforts.

AWS CERTIFIED CLOUD PRACTITIONER

March 2024 – March 2024

- Earned the AWS Certified Cloud Practitioner certification.
- validating an understanding of essential AWS cloud concepts, core AWS services, architecture, security, pricing, and support.
- Now, I am studying towards the AWS developer certification.