

# Ziad Makkawi

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# Software Engineer

## Profile

Software Engineer specialising in backend development and system architecture. Experience building scalable APIs, optimising database performance, and implementing robust CI/CD pipelines.

## Skills

**FrontEnd:** React, TypeScript **Mobile:** Flutter, Dart **BackEnd:** Python, Java, C#, C++, .NET Core **ML:** TensorFlow,

**Database:** PostgreSQL **Tools:** Git, Docker

## Experience

### SOFTWARE ENGINEER INTERN, NHS

NOTTINGHAM, UK. AUG 2024 TO SEPT 2024

- Boosted simulation tool accuracy by validating patient flow models in Python, improving resource allocation by 20% across scenarios..
- Developed GDPR-compliant GitHub guidelines and contributed to NHS-R community webinar presentations on workflow automation and testing outcomes..

### SOFTWARE ENGINEER INTERN (REMOTE), THEIRCIRCLE

TORONTO, CANADA. AUG 2023 TO MARCH 2024

- Implemented responsive UI components and dynamic feature modules, increasing user engagement by 35%.
- Developed an optimised backend API integration, enhancing data retrieval performance by 40% across both platforms (iOS and Android).
- Built and deployed a robust CI/CD pipeline, automating testing and deployment, reducing release times by 25%.

## Projects

### EMERGENCY DEPARTMENT SIMULATION (PYTHON, MYSQL)

AUG 2024 TO SEPT 2024

- Tested and validated a Python simulation tool for modelling healthcare operations, enhancing efficiency and accuracy in resource allocation.
- Proposed strategies such as dynamic bed management and real-time resource allocation to reduce patient wait times.

### BRAIN TUMOUR CLASSIFICATION (PYTHON, TENSORFLOW)

SEPT 2022 TO APRIL 2023

- Implemented a VGG16 Convolutional Neural Network model for classifying brain MRI images, achieving 89% classification accuracy.
- Integrated the model into a web app using Anvil, allowing users to upload MRI scans and get instant results.

### GREENPARK (REACT, TYPESCRIPT, MYSQL, POSTURE SQL)

JUL 2024 TO JUL 2024

- Led a team of 4 developers to build a real-time park & ride guidance application using React and RESTful APIs, integrating live car park occupancy data and public transport schedules to promote sustainable transportation and reduce urban carbon emissions by up to 30%.
- Implemented gamification and route planning features to calculate CO2 reductions versus city center driving, processing multiple park & ride locations' data to showcase innovative open data solutions.

## Education

### NOTTINGHAM TRENT UNIVERSITY

NOTTINGHAM, UK. SEPTEMBER 2020 TO JULY 2023

- Bachelor of Science in Software Engineering. 1st Class With Honours

### BOOT.DEV BACK-END DEVELOPMENT

REMOTE, AUGUST 2025 TO PRESENT

- Completing an intensive backend engineering curriculum focused on Python, C, Go, databases, system design, memory management, and container orchestration with Kubernetes.