

MEHDI MAHMUD | Web Developer, Mathematical Modeller

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Linkedin: <https://www.linkedin.com/in/mehdi-mahmud> | **GitHub:** <https://github.com/MehdiMahmud79>

Portfolio: <https://mehdimahmud79.github.io/portfolio>

Full-Stack Web Developer leveraging my background in mathematical modelling to build more efficient and user-friendly web applications. Recently earned a Bootcamp certificate in Full Stack Web Development from the University of Birmingham having developed skills in JavaScript, CSS, and React.js. Equally confident in deploying technical skills ranging from coding, user interface, and debugging procedures. Having a passion for continuous learning, collaboration, and problem-solving, my plan is to utilise my advanced IT, mathematical and technical skills to become a valuable asset.

TECHNICAL SKILLS

Languages: JavaScript ES5& ES6, CSS3, HTML5

Tools & Applications: Node.js, Express.J, MongoDB, MySQL, Sequelize, GraphQL, Rest API, React.js, jQuery, Bootstrap, Tailwind, Material UI, Responsive Design, GitHub, JWT

Other Skills: Fortran, Matlab,, Abaqus, Adobe Premier, Microsoft Office, Python(Basic)

PROJECTS

- *InQuisitive*
<https://github.com/MehdiMahmud79/inQuizitive> | <https://uk-inquizitive.herokuapp.com/>
 - **Summary:** This web application allows users to create an account, design quizzes, and take quizzes.
 - **Role:** Senior Developer
 - **Tools:** Node.js, JavaScript, Express.js, Chart.js, React, GraphQL, JWT, Tailwind, Mongoose, Apollo-Server, API
- *MovieTime*
<https://github.com/MehdiMahmud79/Movie-Time> | <https://movietimeuk.herokuapp.com/>
 - **Summary:** We wanted to find a way to give our users a comfortable, streamlined, and efficient way to plan their movie night!
 - **Role:** Senior Developer
 - **Tools:** Node.js, JavaScript, Express.js, Sequelize, express sessions, Bootstrap, MySQL, cookies, API.
- *Training-Tracker*
<https://github.com/MehdiMahmud79/Training-Tracker> | <https://training-tracker-uk.herokuapp.com/>
 - **Summary:** In this app you are able to view, create and track daily workouts.
 - **Role:** Full-Stack Developer
 - **Tools:** Node.js, JavaScript, Express.js, Mongoose, semantic UI.

EDUCATION

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| 2021 | Bootcamp Certificate: Full-Stack Web Developer
University of Birmingham - Birmingham |
| 2020 | Doctor of Philosophy: Applied Mathematics
University of Birmingham - Birmingham |

Developed software to simulate Bubble Dynamics using parallel programming in the modern Fortran language.

2009

Master of Science: Applied Mathematics

University of Salahaddin/Erbil - Erbil

Developed a software to solve some types of integral equations using Matlab.

2002

Bachelor of Science: Mathematics

University of Salahaddin/Erbil - Erbil

Produced a multi-language application using Visual Basic to secure text documents using primitive polynomials in the block cipher.

EXPERIENCE

09/2019 to 05/2021

Research Fellow

University of Birmingham - Birmingham, United Kingdom

In collaboration with the School of Dentistry, my main pieces of research involved improving the cavitation around ultrasonic dental scalers.

- Developing a novel mathematical model using Abaqus to effectively calculate the amount of cavitation near a dental implant. This model is now being used as a method of improving dental cleaning techniques.
- Participating in collaborative experiments in a lab environment. Successfully published two academic papers in top Journals.

01/2015 to 09/2019

Teaching Assistant

University of Birmingham - Birmingham, United Kingdom

During my Ph.D. study in the school of Mathematics, I worked as a part-time teaching assistant.

- Assisting undergraduate students in their educational endeavours by allowing them to reach their full potential
- Developing their knowledge of several different mathematical fields: Numerical Analysis, Computational Mathematics using Maple, Mathematical Modelling, C++ programming, and logic).

11/2009 to 09/2014

Lecturer and Undergraduate Administrator

University of Salahaddin/Erbil - Erbil, Iraq

Full-Time Assistant lecturer at Mathematics Department / College of Science to teach (Introduction to Cryptography, Matlab, Visual Basic, JavaScript, Advanced Calculus, Computational Mathematics, Numerical Analysis).

As a Lecturer and Undergraduate Administrator, my role was to:

- Supervising final year students in their projects.
- 95% pass rate and 4.5/5 positive student feedback for the taught modules.
- Successfully published two academic papers in top Journals.

During my time at the university, I briefly took on the position of the Head of School for six months and was a member of the scientific committee. This role allowed me to:

- Develop a firm understanding of the needs of both staff and students by offering advice, holding meetings, and solving any issues.
- Communicate with other schools within the University to organise research collaborations and conferences.
- Be an active member of the examination committee for the College of Science.