ADAM MORRIS

Professional Summary

Recent engineering graduate with a master's degree in Engineering Mathematics, combining mathematical theory, practical engineering and scientific computing skills to solve real-world problems. Seeking an opportunity to apply expertise and make a meaningful impact in the field. Passionate about embracing emerging technologies, such as Artificial Intelligence and Robotics systems. Strong work ethic, detail-oriented, and committed to delivering high-quality results. Eager to contribute to innovative projects and further develop as a professional engineer.

Work History

Demonstrator, 10/2023 to 05/2024
University of Bristol **-** *Bristol*
Role aiding Engineering Mathematics students in their Mathematical and Data Modelling projects.

- Displayed excellent results in the completion of this unit to be offered this role
- Provide academic support to groups of students including technical writing and methodologies
- Research and understand a range of unfamiliar topics in a short timespan
- Planning and organisation of meetings with multiple groups simultaneously

Research Engineer, 06/2023 to 10/2023
SportsViz **-** *Remote*
Research project investigating the impact of novel data interpretation and artificial intelligence on elite sports performance analysis with the Football association of Wales (FAW).

- Authored technical reports outlining the current literature on the subject and potential future plans for this work
- Engaged in professional work environments with a range of clients from different backgrounds
- Displayed examples of the technical capabilities of artificial intelligence and data analysis at the international sports level

Education

Meng, Engineering Mathematics, 09/2020 to 07/2024
University of Bristol **–** *Bristol*

- Master's Thesis: Anti-Aligning Robots
- Key Focuses: Artificial Intelligence, Robotics, Mathematical and Data Modelling
- Class: *1st (TBC)*
- Societies: Treasurer and Sports Secretary of Welsh Society

A-Levels, 09/2017 to 07/2019
Ysgol Gymraeg Ystalyfera Bro Dure **-** *Swansea*

- Mathematics - A*
- Further Mathematics - A
- Physics - A
- Computer Science - A
- Welsh Baccalaureate – A

Contact

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Permit: Category B
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Technical Skills

- Machine Learning and AI
- Multiple Programming Languages
- Software Engineering Principles (including Git)
- Mathematical and Data Modelling
- Engineering and Physics Principals
- Scientific Computing and Data Analysis
- Microsoft Office

Soft Skills

- Problem Solving
- Detail Oriented
- Leadership
- Team Collaboration
- Communication
- Time Management

Languages

English:
Fluent
Welsh:
Fluent

Programming Languages

Proficient:

- Python, MATLAB, LATEX

Experienced:

- C/C++, Arduino, HTML, CSS, SQL

Projects (see website for further details)

- Differential equation modelling for COVID-19 levels in the UK
- Investigating the relationship between traffic velocity and emissions
- Using data-based modelling to investigate and predict foot traffic on Park Row, Bristol
- Modelling and controlling of a self-balancing electric unicycle
- Agent-based COVID-19 virus modelling and simulation web-app
- Investigation, simulation and optimisation of the car financing market
- NHS bed occupancy forecasting
- Investigating the feasibility of electric vehicle infrastructure using current data and queuing theory
- ODE and PDE simulations using Python
- Aircraft detection in satellite imagery using artificial intelligence
- PID controlled line following with 3pi+ Pololu robot
- CNN and robotic swarm design for coral reef restoration
- PID tuning using genetic algorithms for the 3pi+ Pololu robot
- Anti-aligning robots

Individual Units

Mathematics, Physics and Engineering: Engineering Mathematics I and II, Discrete Mathematics I and II, Engineering Physics I and II, Thermo-fluids, Applied Linear Algebra, Signals and Systems, Control Theory, Optimisation Theory, Continuum Mathematics, Non-linear Dynamics and Chaos, Advanced Non-linear Dynamics and Chaos

Modelling and Data Analysis: Mathematics and Data Modelling I, II and III, Data Science, Applied Statistics, Transport and Mobility Modelling, Mathematical Modelling in Physiology and Medicine, Uncertainty Modelling for Intelligent Systems, Technical Project

Software Engineering: Introduction and Further Computer Programming, Numerical Methods in MATLAB, C for Embedded Systems, Scientific Computing, Introduction to Artificial Intelligence, Bio-Inspired AI, Robotics Systems

Miscellaneous: Learning, Computation and the Brain, Principles of Professional Practice