Amber Palmer

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PERSONAL PROFILE

Incoming PhD student in Engineering Mathematics at the University of Bristol with a First-class predicted MBiomed degree from Cardiff University. Skilled in agent-based modelling and data analysis, with experience in R, NetLogo and Python. Research background includes modelling Zika virus dynamics and analysing bias in COVID-19 data. Strong communication, collaboration and problem-solving skills across interdisciplinary projects.

EDUCATION

MBiomed Biomedical Sciences, Cardiff University (predicted grade: 1st)
Expected Graduation date: July 2025

- Integrated Masters project: Investigating Causes Underlying Dynamical Changes in Arboviral Infection Incidence in Human Populations using Agent-based Modelling: A Case-Study on the Zika Virus Epidemic
    - Dissertation mark: 80
    - Conducted a comprehensive literature review incorporating a wide range of articles covering immunology, epidemiology and modelling techniques
    - Developed ordinary differential equations and agent-based models and calibrated the models against each other
    - Ran simulations on a high-performance computing cluster.
    - Maintained a GIT repository
    - Collaborated with international researchers in Brazil

Hereford Sixth Form College, Hereford
September 2019 – July 2021

- **A Levels:** Biology (B), Sociology (A*); Psychology (B)
- Core Mathematics Level 3

Croesyceiliog Comprehensive School, Cwmbran
September 2014 – July 2019

- **GCSEs:** 11 GCSEs A-C

RELEVANT EXPERIENCE

Intern, Cardiff University School of Mathematics
June 2024-August 2024

- Conducted an in-depth literature review on hospital capacity planning and demand forecasting
- Effectively communicated my findings to my supervisor during weekly meetings and through a project report
- Presented my findings at a poster presentation

Intern, Oxford University

June 2023-August 2023

- Conducted a project on data bias for COVID-19 and how this effects epidemiological parameter estimates
- Communicated my findings in the form of a scientific report
- Presented my project at a conference-style event, receiving positive feedback and fostering discussions on epidemiological techniques

EMPLOYMENT AND VOLUNTEERING

Play and Wellbeing Support Worker, Torfaen Play Service
June 2021- present

- Ensured safe, engaging play experiences for children with additional needs, tailoring activities based on individual communication and sensory requirements.
- Used interpersonal skills to build a rapport with the children and liaise with parents at the beginning and end of every session.
- Completed specialised training including PEG Tube Displacement, PEG Tube Feeding and Water, Paediatric First Aid, Team Teach, Autism Awareness, EpiPen administration, Personal Care, Level 1 in Play work, Safeguarding.

Student mentor, Cardiff University
September 2023 – July 2024

- Supported first year students with their transition from school to university.
- Met regularly with mentees leading both group and 1-to-1 sessions.

Student Academic Representative, Cardiff University
September 2023 – July 2024

- Developed surveys to gather feedback from students
- Communicated student feedback to key university staff

Volunteer, Torfaen Play Service
June 2019 – June 2021

- Working as part of a team to provide disabled children with fun activities on the weekends and during the school holidays.

RELEVANT SKILLS

Communication: Able to articulate scientific results clearly in both written and verbal formats to scientific and non-scientific audiences.

Technical skills: R, Python, NetLogo, Linux, Bioinformatics tools, GIT.

Research skills: Literature review, data analysis, scientific writing

Problem solving: Proficient in using computational and mathematical methods to solve epidemiological problems.

REFERENCES

Available on request