Engineering and Physical Sciences Research Council Doctoral Landscape Award

PROJECT TITLE: AI for Climate Misinformation: Detecting, Understanding, and Countering Digital Narratives

Lead Supervisor: Professor Gail Whiteman

Co-Supervisors: Dr Marcos Antonio de Oliveira Junior – m.oliveira-jr@exeter.ac.uk

https://experts.exeter.ac.uk/45392-marcos-de-oliveira-jr

Webpage: https://experts.exeter.ac.uk/35108-gail-whiteman

Project details: Climate misinformation represents a growing barrier to effective action on the climate crisis. Misleading narratives spread rapidly through digital platforms, shaping public opinion, undermining trust in science, and delaying urgent policy and business responses.

This PhD will investigate how artificial intelligence (AI), particularly machine learning, can be used to detect, understand, and counter climate misinformation at scale. The student will develop computational models to classify and analyse climate-related misinformation across diverse online platforms, including social media, news outlets, and blogs. By applying explainable AI techniques, the project will ensure that model outputs are transparent and interpretable, enabling their use by fact-checkers, journalists, policy makers, and educators. Alongside detection, the project will explore interventions, such as gamified tools, visualisations, or chatbot systems, that communicate scientific evidence more effectively and build public resilience to misinformation.

The project aligns with EPSRC's remit in AI, data science, and responsible digital technologies, while being deeply embedded in the University of Exeter's strategic commitment to climate and nature impact. It will be based in the Nature & Climate Impact Team (NCIT), led by Professor Gail Whiteman, whose research focuses on systemic climate risks, communication, and real-world impact.

The student will benefit from an interdisciplinary supervisory team spanning computer science, business, and communication studies, and will also have opportunities to collaborate with NCIT's high-profile outreach initiatives, including Arctic Basecamp and Climate Basecamp, which engage global audiences on climate risks. The research environment will provide access to world-leading expertise in AI through Exeter's Institute for Data Science and Artificial Intelligence (IDSAI), as well as links to international partners and communication networks. This interdisciplinary context will equip the student with both technical expertise and broader engagement skills, preparing them for careers in academia, policy, industry, or the non-profit sector.

Ultimately, the project will deliver new insights and practical tools to support trustworthy climate communication, safeguard public understanding, and accelerate effective responses to the climate crisis.

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Project specific entry requirements: Applicants should have a strong background in communications, climate science, computer science, artificial intelligence, or a closely related discipline. Experience with machine learning, natural language processing, or data analysis is highly desirable, alongside strong programming skills (e.g. Python, PyTorch/TensorFlow). Candidates with an interest in climate change, misinformation studies, or interdisciplinary research are particularly encouraged to apply.

Potential PhD programme of study: PhD in Environmental Intelligence

Department: Management

Location: University of Exeter, Hope Hall - Nature & Climate Impact Team

Please direct project specific enquiries to: Professor Gail Whiteman - g.whiteman@exeter.ac.uk

Please ensure you read the entry requirements for the potential programme you are applying for.

To Apply for this project please click on the following link - **APPLY HERE**