Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

Structured PhD Position in Statistics and Higher Education (4-years full-time)

Project title: Evaluating the Impact of Generative Artificial Intelligence Tool Use on Student Learning and Assessment

Project supervisor: Dr. Emma Howard (Trinity College Dublin)

Project location: Discipline of Statistics and Information Systems, School of Computer Science and Statistics, Trinity College Dublin, The University of Dublin, Ireland. The PhD student will be expected to be a resident in Ireland for the duration of the PhD.

Application deadline: 8th March 2026

Start date: Anticipated start date is the 1st September 2026

PhD structure: This is a full-time 4-year structured PhD project. The funding for the project includes a tax-free stipend of €25,000 per annum. In addition to the stipend, EU fees (for those who qualify) will be covered for four years.

PhD topic: Generative artificial intelligence (GenAI) tools have transformed the educational landscape, with reports stating that over 92% of higher education students are using them. Despite their potential, the use of GenAI tools raises significant concerns regarding academic integrity, ethical and environmental responsibility, skill development, long-term learning, and the potential devaluation of academic qualifications. Empirical research examining the impact of using GenAI tools on student learning remains limited and has yielded mixed findings, creating uncertainty for educators and institutions.

This project aims to deliver rigorous evidence-based insight into how GenAI use is impacting student learning and assessment in higher education. The project will critically assess the validity, reliability, and effectiveness of different assessment types in light of GenAI. To rigorously assess the educational impacts of GenAI tool use, this project will involve designing and implementing observational and experimental studies, collecting data, developing novel statistical models, conducting data analysis, and interpreting the results. The project will need to overcome the challenges of observational data, short-term measurement, and uncertain GenAI usage. With a strong commitment to open science and reproducibility, the research will inform evidence-based recommendations for the higher education sector.

The Institution: The School of Computer Science and Statistics at Trinity College Dublin is a collegiate, friendly, and research-intensive centre for academic study and research excellence. The School has been ranked 1st in Ireland, top 25 in Europe, and top 100 Worldwide (QS Subject Rankings 2018, 2019, 2020, 2021, 2023).

Essential Requirements:

1. Applicants must meet criteria a) or criteria b):
    a. Applicants should have (or expect to attain prior to project start) at least a 2.1 honours degree or equivalent in the area of statistics, applied mathematics or similar. Applicants must also have some experience with statistical computing, preferably through R, and demonstrate an interest in (STEM/higher) education research.
    b. Applicants should have (or expect to attain prior to project start) at least a 2.1 honours degree or equivalent in the area of education, psychology or similar. Applicants must also demonstrate proficiency in statistical analysis, machine learning, or statistical modelling and have some experience with statistical computing, preferably through R.
2. Applicants for whom English is a second language will be required to demonstrate their competence in the English language in line with Trinity College Dublin requirements as appropriate.

Desirable Requirements:

- A Master's degree in a relevant field
- Applicable research or practical experience

Application Instructions:

Please submit a single PDF document consisting of:

1. **Cover letter (two pages maximum)** indicating how your skills and experience make you a suitable candidate and your motivation for applying.
2. **Curriculum vitae (two pages maximum)** including at a minimum your name, educational institution, qualification stating overall grade/percentage (predicted grades are acceptable for those still studying) and contact details of two academic referees.
3. **Academic transcripts of degree/degrees**.

Applications and informal queries about the position should be submitted to Dr. Emma Howard (emhoward@tcd.ie). Please include "[PhD Stat & HE] Your name" in the subject line.