PhD studentship in Human-computer Interaction exploring AI in Film and TV

One fully funded PhD position is available to work with Dr. Susan Lechelt and Prof. Ewa Luger in the School of Informatics at the University of Edinburgh on a project titled “Scripted Production Futures in the Age of AI”. The project will be supported by an industry partner: BBC R&D.

As AI evolves at an unprecedented speed, it is important to reflect on whether and how AI tools will support, or conflict with, the values embedded in the sectors in which they will be utilised. For example, the 2023 Writers Guild of America strike brought to the fore fears about how AI will impact the scripted production sector – a creative sector comprising film and scripted TV. The aim of this project is to investigate these questions in-depth, in context of scripted production. Through qualitative and participatory design research with scripted production practitioners (e.g., scriptwriters, post-production specialists, among others), the project will develop understandings of the sector’s values and inform how future AI systems, supporting aspects of scripted production workflows, can be designed with sensitivity to these values.

The anticipated start date is 01 October 2024.

Candidate’s profile
The candidate must meet the PhD entry requirements as stated here: https://www.ed.ac.uk/studying/postgraduate/degrees/index.php?r=site/view&id=491

The AHRC also expects that applicants to PhD programmes will hold, or be studying towards, a Master’s qualification in a relevant discipline; or have relevant professional experience to provide evidence of ability to undertake independent research.

For this studentship, we’re keen to hear from applicants from a variety of academic and professional backgrounds, including those that cross traditional disciplinary boundaries. As such, formal qualifications in technical subjects, social sciences or arts and media are all welcome, as well as wider experience in creative practice or research with people. Experience in the fields of human-computer interaction, interaction design or creativity studies, prior experience working with digital tools and methods, and the use of qualitative research methods including thematic analysis would be of particular benefit.

Studentship and eligibility
The studentship is funded by SGSAH (https://www.sgsah.ac.uk/partners/cda/) and covers:

- Full time PhD tuition fees for 3.5 years. The University will cover the difference between home and international PhD rates.
- A tax-free stipend at UKRI levels for 3.5 years. The rate in 2024/25 will be £19,237 with an additional £550 per year.
- A nominal budget of £1750 in total to support conference attendance.

Both Home and International students are welcome to apply.

Application Information
Applicants must submit:
- Copies of all degree transcripts and degree certificates (and certified translations if applicable). This requirement applies to fully completed and in progress degrees.
Applicants must also submit a single pdf document which:

- Details your full contact details together with the names and contact details of two referees (max 1 page); and
- Explains your interest in the studentship and outlines your qualifications for it, as well as an indication of the specific areas of the project you would like to develop (max 2 pages).
- Provides a sample of your writing – this might be an academic essay or another example of writing style and ability.
- A full CV (max 2 page)
- Copies of two academic references on letter headed paper, signed and dated within the last 12 months.

All required documents should be submitted in one email to pgawards@ed.ac.uk no later than 17:00 GMT on Monday 6th May.

Please note that only complete applications (i.e. those that are not missing the above documentation / required information) will progress forward to for further consideration and academic selection.

Invite to interview
Applicants will be notified if they are being invited to interview by Friday 10th May. Interviews will take place in the week commencing 13th May in person or via an online video meeting platform depending on the applicant’s location and preference.

Queries
If you have any queries about the application process, please contact: pgawards@ed.ac.uk

Informal enquiries can be made to Dr. Susan Lechelt, susan.lechelt@ed.ac.uk, Professor Ewa Luger, ewa.luger@ed.ac.uk and Dr. Michael Evans, michael.evans@bbc.co.uk.

Environment
The School of Informatics is one of the largest in Europe and currently the top Informatics institute in the UK for research power, with 40% of its research outputs considered world-leading (top grade), and almost 50% considered top grade for societal impact. The University of Edinburgh is constantly ranked among the world’s top universities and is a highly international environment with several centres of excellence. The student will be based at the Institute for Design Informatics (https://www.designinformatics.org/). This is an interdisciplinary institute which explores how to design systems for better human-computer interaction, in diverse settings such as creativity and culture, health and finance.

The studentship will be in collaboration with BBC R&D, where the student will also spend considerable time. As part of the studentship, there will be a period of funded work placement at BBC R&D in Salford, which will be co-determined with the student.

Further information about the research
Artificial Intelligence (AI) is evolving apace and leading to both disruption and new opportunities in the creative industries, including significant potential impact for scripted production.

Scripted production is an important subset of the creative industries, spanning feature film as well as high-end and low-budget scripted TV. It comprises a complex ecosystem of
creative roles and processes, including among others, scriptwriting, acting, filming, directorial work, and post-production work. AI has already started to permeate some of these roles and processes. For example, the potential of generative AI for scriptwriting has been explored for years, pre-dating current Large Language Models (LLMs) [1]. BBC R&D explored how rule-based AI models might be used for automating camera-shot framing [2]. Today, rapid advancements in LLMs, AI-supported image generation and editing, and emerging text-to-video generative AI, hold potential to further change a range of scripted production processes.

However, as new AI tools are developed, it is important to reflect on whether and how they will support, or conflict with, the values embedded in the sectors in which they will be utilised. For example, the 2023 Writers Guild of America strike brought to the fore fears about how AI will impact scripted production’s future, alongside ethical questions about its use [3]. Simultaneously, a growing body of work has begun demonstrating how individual creative sectors perceive the points at, and level to which, the automation and generative potential afforded by AI can be valuable. For example, recent research has indicated how perceptions of trust, speed and reliability are of key importance for journalists using LLMs to explore journalistic angles [4]. In contrast, for some performing artists, ambiguous and ‘strange’ LLM outputs are considered fruitful for inspiration and creative interpretation when developing performance pieces [5]. In sum, understanding what a given sector values in its work, as well as in creativity support tools, can inform the design of more valuable and acceptable AI-based tools for that sector.

Conversely, these understandings can also help map the boundaries of what future tools should, and should not, be used for. However, there remains a research gap in terms of understanding how the values embedded in scripted production interface with developments in AI.

By directly engaging with a range of scripted production practitioners, the research will give rise to new understandings that will inform future design of AI tools and interfaces that bolster, rather than flout, the values of this sector. Moreover, the research will contribute new empirical and theoretical understandings to bodies of work within Human-Computer Interaction (HCI) on Value-Sensitive Design and on Creativity Support Tools.

Given the current rapid development of AI models, the timescale of a PhD will provide an opportunity to be responsive to new tools as they become available (e.g., text-to-video), providing space to critically reflect on their potential impact for the sector and to be prepared to crystallise positive impact from such technological disruption.

**Methodological approach:**
This research will utilise best-practice qualitative, participatory, and design-based approaches. Given the breadth of the ecosystem, we will initially focus on specific scripted production roles in line with the student’s interests to provide an initial focus, for example post-production or directorial work.

The approach will involve:
- **Qualitative research to understand the values and landscape of scripted production work.** Specifically, interviews and ethnomethodological work will be carried out with scripted production practitioners. These will explore existing workflows and technologies used, to identify specific aspects of workflows where the automation and generative potential of AI might be considered valuable and
acceptable. This could include, for example, exploring alternative storylines, or exploring cuts in post-production.

- **Exploring practitioners' perceptions of new AI models and tools, including professional concerns, expert impact insights and creative potential.** This might be done through participatory workshops, where participants will be asked to explore and experiment with existing AI tools in context of their typical workflows, including text generators such as ChatGPT, image generation and text-to-video generation tools (alongside other state of the art tools that may emerge during the PhD). The workshops will support discussion about how the capabilities of these tools might fit into their work and process. Simultaneously, they will map, in detail, what forms of AI support might be considered unacceptable.

- **Co-designing future AI tools.** Co-design approaches, for example collaborative workshops, will be utilised to support practitioners in envisioning how future AI tools might be designed to support their work. These will generate novel design insights, as well as design concepts, outlining features and interaction styles that future AI tools might include to support the sector.

References:
3. https://www.wired.co.uk/article/us-writers-strike-ai-provisions-precedents