

CDT for AI in Inclusive Digital Media

Surrey Institute of People-Centred AI & Royal Holloway's StoryFutures

StoryFutures

National Centre for Immersive Storytelling

NFTS

BRITISH
FILM AND
TELEVISION
INSTITUTION

UK
RI

Arts and
Humanities
Research Council

INDUSTRIAL
STRATEGY

ROYAL
HOLLOWAY
UNIVERSITY
OF LONDON

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OF LONDON



People-Centred AI
UNIVERSITY OF SURREY



1. The University of Surrey, partnered with Royal Holloway University of London, have been awarded funding for a 'Centre for Doctoral Training' (a 'CDT').
2. Our CDT will fund up to 80 PhD studentships, with 5 annual intakes and an overall duration of 8 years.
3. The focus of our CDT is to develop AI that helps people gain better access to modern digital media, including TV, video, web, text,...
4. Our CDT is partnered with a variety of commercial organisations, government departments and charities.

Access to digital media services is essential for societal inclusion:

- news, entertainment, education, healthcare, welfare, finance, government....
 - web, podcasts, games, radio, TV, film, ebooks,
 - current media services '**one size fits all**' with limited personalisation/accessibility options
 - Audience are diverse, we each have individual needs and preferences
- ⇒ **exclude or fail to engage**

Opportunity

- **Inclusive design of digital media services**
 - AI has the potential to adapt digital media to individual interest, preferences & accessibility
 - Reduce barriers to inclusion: neuro-diversity, sight, hearing...
 - **Personalised media services which dynamically adapt**
- ⇒ **Individual:** improved media services and entertainment experiences
- ⇒ **UK creative industries:** grow audience size
- ⇒ **UK population:** societal inclusion & equality

**Train future creative industry leaders
to create media services which are inclusive for all**

**Creative Storytelling + AI + Inclusive Design = Intelligent
Media Services for All**



AI – Artificial Intelligence & Machine Learning
Creative Technology
Vision, Audio
Linguistics
Audio-Visual Machine Learning
Interaction Design
Psychoacoustics
Law
Social Sciences
Business
Digital Economy
.....

StoryFutures

Royal Holloway, University of London

Storytelling
Creative Arts
Inclusive Design
Media Accessibility
Human Factors
Audience Experience Evaluation
Psychology
XR production
.....

The Challenge-Based Approach:

- We use partner-inspired research problems to guide the student research
- Challenges last 3-6 months as 'add-on' to each student's core PhD research
- Challenges are group activities, with multidisciplinary teams of students
- Outputs of challenge projects are shared with partners immediately
- A backlog of challenge ideas is maintained and refreshed at least annually
- Challenge projects are co-designed and co-funded with partners
- Outputs of challenge projects will ideally be shared publicly and open-sourced



Example challenge questions received from partners:

1. How do we adapt media while maintaining original narrative and creative intent?
2. How do we identify and adapt to target audiences – should we?
3. Simplification of media is a common objective – how do we do that with AI?
4. How do we maintain privacy and security to preserve trust?
5. What are the economics of inclusion and accessibility?
6. What are the external drivers for improved inclusion and how do we leverage them?
7. What new applications of media can we identify?
8. What new media formats can be created through the use of AI?
9. How can we convert any sensory mode to another?
10. How can we improve our understanding of what the audience wants?

- We would like to include the U3A for the following reasons:
1. Access to a large group of people with experience, opinions, insights and real examples of individual/personal challenges.
 2. Volunteers that could occasionally help define and design challenge projects
 3. Volunteers that could share insights with students
 4. Volunteers who could help to assess and provide feedback on ideas and solutions offered by the challenge teams
 5. Volunteers who might contribute technical ideas that the students could pursue

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Want to get involved?

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