# Al4Media – A European Excellence Centre for Media, Society and Democracy



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### The AI4Media Consortium

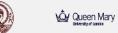


9 universities

















9 research centres



















12 industrial partners

















BA.

odl.ai





15 European countries



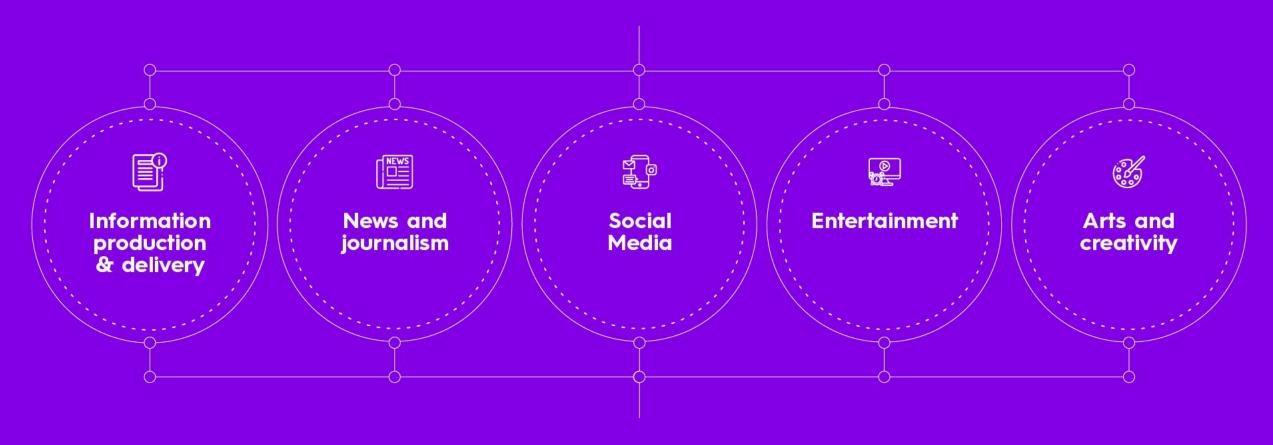




## **AI4Media's Mission**

- Deliver the next generation AI Research and Training at the service of media, society and democracy
- Ensure the embedding of ethical and trustworthy AI into future AI deployments
- Reimagine Al as a human-centered, trusted and beneficial enabling technology for media and society

# The Media



are crucial to shape societal values and opinions

# | Unique selling point



# Next generation AI for the Media Industry

Core research



Multi-modal content



Human in the centre

Real-world applications



Fact-checking & verification



Automated game design



News production automation



Content moderation

Impact of policy & regulations



Monitoring of EU regulatory landscape

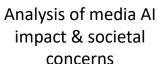


New policy recommendations

Societal concerns







Education & training



International AI Doctoral Academy

Curriculum, courses and educational material for media AI

### Research & innovation in AI for Media

### Overview of major scientific & technological challenges addressed



# New learning paradigms & distributed AI

Lifelong and on-line learning
 Manifold learning and disentangled feature representation

Transfer learning

 Neural Architecture Search
 Al at the Edge, decentralised and distributed learning
 Deep quality diversity

•Learning to count

Quantum assisted reinforcement learning







#### **Human- & society-centered AI**

- Policy recommendations for content moderation
- Manipulation and synthetic content detection in multimedia
- Hybrid, privacy-enhanced recommendation
- •AI for healthier political debate
- •Detection of perceptions of hyper-local news
- Measuring and predicting user perception of social media
- •Real-life effects of private content sharing

#### **Trustworthy Al**

- •Legal and ethical frameworks for trusted AI
- •Novel methods for ensuring AI robustness
  - Novel methods for explainable and interpretable AI
- Privacy- and security-enhanced federated learning approaches
- Methods for detection and mitigation of bias affecting fairness in recommender systems
  - Benchmarking of AI Systems





#### **Content-centered AI**

- •Media analysis and summarization
- Media content production
- •Learning with scarce data
- •Language analysis in Media
- Computationally demanding learning
- Music annotation and audio provenance analysis

# Real-world applications of AI through seven use cases AI4media



**AI in Vision** 

High quality video production & content automation

Al for News -Smart News Assistant

Al for Social
Media and
against

Al for Social Sciences and Humanities



Al for Games

Al for Human Co-creation





disinformation

https://www.ai4media.eu/use-cases/

# Submit your proposals to the 2<sup>nd</sup> Open Call until Nov. 30th!







# 2<sup>nd</sup> Open Call challenges



### Research challenges

- C1-R Reinforcement learning and the challenge of generalisation
- C2-R Evolutionary learning and the challenge of evaluating quality
- C3-R Scarce data and the cross-media transfer of knowledge
- C4-R New decentralised collaborative learning paradigms for Al
- C6-R Frugal cross-modal representation for media research
- C7-R Broadening the spectrum of Interpretable AI
- C8-R Standardising AI datasets and model creation
- C9-R Novel Al-powered enablers for social media research
- C10-R Social media alert system to avoid the attention gathering loop
- C11-R Representative and Inclusive Depictions of AI
- C12-R-OPEN Open Research Challenge

### **Application challenges**

- C1-A Realising a hybrid AI application in AI4EU Experiments
- C2-A Al global support to informative content production
- C3-A New learning methods for music overcoming scarce data
- C4-A Al for suggesting visually appealing images based on text
- C5-R Quantum Reinforcement Learning for classical data processing C5-A Recommender Systems to Support Exploratory Research with Media
  - C6-A Al for automated testing and sound synthesis
  - C7-A-OPEN Open Application Challenge





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#### **Our Consortium**























