LIVERPOOL JOHN MOORES UNIVERSITY

Artificial Intelligence, Deepfakes and the Future

Module Information

2022.01, Approved

Summary Information

Module Code	7117AMP
Formal Module Title	Artificial Intelligence, Deepfakes and the Future
Owning School	Engineering
Career	Postgraduate Taught
Credits	10
Academic level	FHEQ Level 7
Grading Schema	50

Teaching Responsibility

LJMU Schools involved in Delivery
Engineering

Learning Methods

Learning Method Type	Hours
Lecture	10
Practical	6
Tutorial	6

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
JAN-CTY	CTY	January	12 Weeks

Aims and Outcomes

Aims	To explore the history of artificial intelligence and its future directions, especially in relation to legal proceedings, with a particular view on audio and video systems.To consider the generation and detection of deepfakes, the impact and concerns about deepfakes, and their role within legal proceedings.

After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Evaluate the application of artificial intelligence within legal proceedings with particular focus on audio and/or video systems
MLO2	2	Critically discuss the implications of deepfakes within legal proceedings
MLO3	3	Propose future directions that AI will take in relation to legal systems.

Module Content

Outline Syllabus	Ethics of AI Decision support systemsFuzzy logicMachine LearningDeep learningNeural networks including Deep neural networks, Convolution neural networks and Generative adversarial network Facial recognitionForensic support software based on AIDeepfakes: history and creationApplications of deepfakesDeepfake detection methods
Module Overview	Artificial Intelligence is becoming a leading part of legitimate audio and video creation, as well as a significant player in forensic work. It is also being used for nonlegitimate purposes to produce fake and deepfake audio and video. This module will consider what constitutes Artificial Intelligence, and how it can be used for legal and illegal activities. Furthermore, time will be spent considering some of the advantages and disadvantages of utilising AI methodologies, and related ethical issues.
Additional Information	Artificial Intelligence is becoming a leading part of legitimate audio and video creation, as well as a significant player in forensic work. It is also being used for nonlegitimate purposes to produce fake and deepfake audio and video. This module will consider what constitutes Artificial Intelligence, and how it can be used for legal and illegal activities. Furthermore, time will be spent considering some of the advantages and disadvantages of utilising AI methodologies, and related ethical issues.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Presentation	Portfolio of work	100	0	MLO1, MLO2, MLO3

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Karl Jones	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings