

Warning: An incomplete or missing proforma may have resulted from system verification processing

Title: Artificial Intelligence, Deepfakes and the Future
Status: Definitive
Code: **7117AMP** (129235)
Version Start Date: 01-08-2021

Owning School/Faculty: Engineering
Teaching School/Faculty: Engineering

Team	Leader
Karl Jones	Y

Academic Level: FHEQ7 **Credit Value:** 10 **Total Delivered Hours:** 22
Total Learning Hours: 100 **Private Study:** 78

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	10
Practical	6
Tutorial	6

Grading Basis: 50 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Portfolio	AS1	Portfolio of work on AI, deepfakes, AI ethics and future directions	100	

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.

Learning Outcomes

After completing the module the student should be able to:

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

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Portfolio of work	1	2	3
-------------------	---	---	---

Outline Syllabus

Ethics of AI

Decision support systems

Fuzzy logic

Machine Learning

Deep learning

Neural networks including Deep neural networks, Convolution neural networks and

Generative adversarial network

Facial recognition

Forensic support software based on AI

Deepfakes: history and creation

Applications of deepfakes

Deepfake detection methods

Learning Activities

Lectures, practical sessions and demonstrations.

Notes

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.