EASA
European Union Aviation Safety Agency

Fly AI Forum – Panel 2:

Session 2: AI regulation, standardisation and application

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An Agency of the European Union

Overview of concrete AI/ML use cases in aviation

Airworthiness and air operations

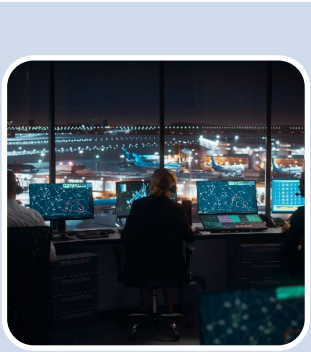
Visual Landing guidance

Computer vision

Flight training

Assessment of training performance

Computer vision

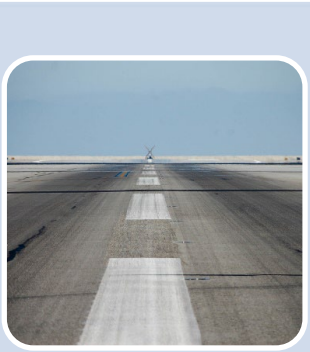


ATM/ANS

Conflict Detection and Resolution

Optimisation

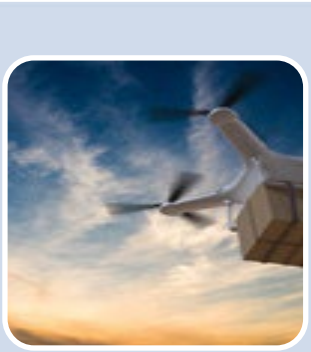
+ Natural Langauge Processing



Aerodromes

Detection of Foreign Object Debris (FOD) on the runway

Computer vision



Drones

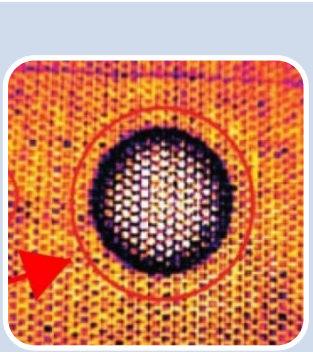
Detection of object on delivery pad

Computer vision

U-space

Support to U-space management

Optimisation



Maintenance

Damage detection in images

Computer vision

AI = Artificial Intelligence ML = machine learning

Common challenges & statement of concerns

Data & knowledge management

- Difficulty in keeping a comprehensive specification through data and knowledge
- Existing development assurance frameworks not adapted to learning and inference

AI assurance

- Addressing model bias and variance optimisation in the various steps of the AI assurance process
- Elaborating pertinent guarantees of AI models and on the absence of unintended behaviour

AI explainability

- Coping with limits in predictability and explainability of the AI application behaviour

Human-AI teaming

- Managing shared operational authority in novel types of human-AI interaction
- Dealing with human oversight in remote supervision.

The solution:
the AI trustworthiness concept

AI regulation, standardisation and application