# **AI in Military Applications, Global Combat Air Programme: Tempest**

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| **Acronyms** | |
| AI | Artificial Intelligence |
| GCAP | Global Combat Air Programme |
| GPS | Global Positioning System |
| GPWS | Ground Proximity Warning System |
| IMU | Inertial Measurement Unit |
| TCAS | Traffic Collision Avoidance System |

## Introduction

## Current Successes

* How is AI already used in unmanned aerial vehicles?
* Loyal Wingman drones

## Future Continuation and Improvement

* Threat analysis
* Could link to GPWS systems? GPS denied environments, current use is Kanban filters to account for IMU navigational drift, how could AI supplement this?
* Ethics of replacing pilots?

"We assess that pilots will still have a crucial role to play when GCAP comes into service and that their role, and the overall capability of the aircraft, will be augmented substantially by AI and autonomous technologies." - Maria Eagle, Labour, Minister for Defence Procurement of United Kingdom (Parliament.uk, 2024)

## References

Parliament.uk. (2024). *Written questions and answers - Written questions, answers and statements - UK Parliament*. [online] Available at: https://questions-statements.parliament.uk/written-questions/detail/2024-12-12/19736/ [Accessed 25 Feb. 2025].

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