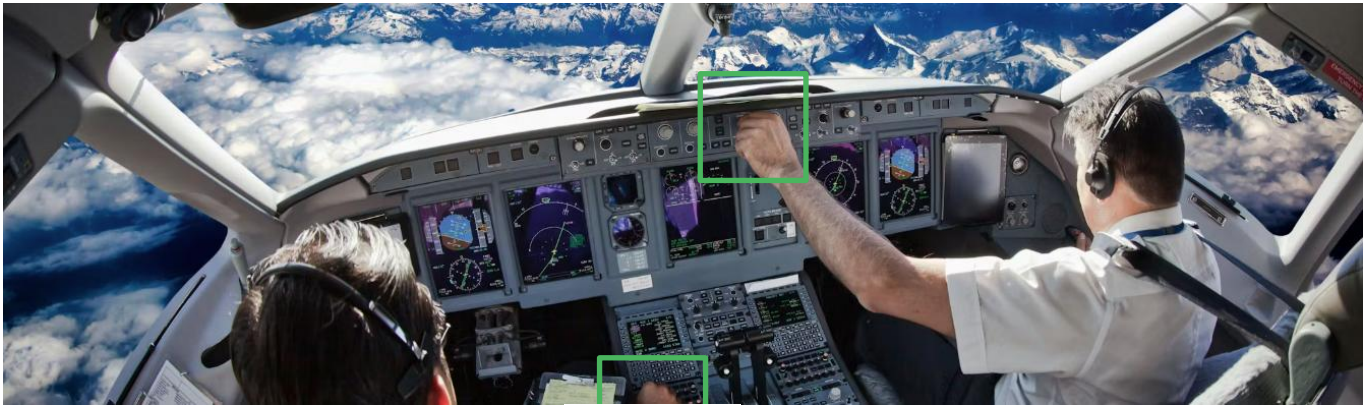




ADP

Analysis of Cockpit Operations using Computer Vision Methods

Flight decks play a crucial role in ensuring flight safety and operational efficiency, yet there is limited objective data on how frequently flight crew interact with individual cockpit systems during actual flights.

Understanding which displays, panels, and controls are used most frequently can reveal valuable opportunities for automation and improved design.

Recent advances in computer vision and machine learning allow us to analyze operational cockpit video to gain actionable insights. Such data-driven analysis can support the development of digital assistance solutions, ease pilot workload, and pave the way for concepts like reduced crew operations.

In this project:

The aim of this project is to develop and apply a computer vision-based analysis pipeline for operational cockpit videos. Using a range of machine learning and computer vision methods—selected and tested by the project group—students will quantify how often different cockpit systems and areas are accessed or interacted with. The work should be automated as far as possible and documented. The results will provide a basis for further digital or autonomous cockpit solutions.



Organizational:

start immediately

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