



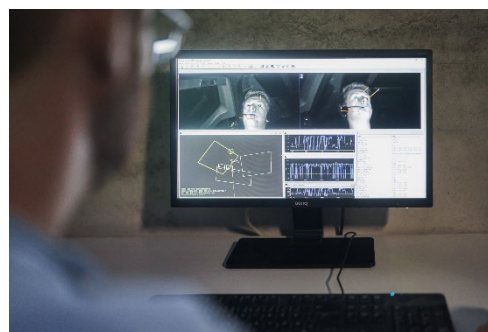
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Tracking Team Dynamics: Eye-Tracking-based Analysis of Team Dynamics in a Commercial Aircraft Cockpit

In commercial aircrafts, pilot flying and pilot monitoring are working together to guarantee safe operation. During normal operation, work share between both pilots is maintained by fixed individual responsibilities and explicit communication. However, during critical scenarios both pilots need to be flexible in their activities to diagnose the problem and act accordingly. In this thesis, we want to analyze flight crew team dynamics based on eye-tracking and other behavioral metrics in such situations. This knowledge can subsequently be used to design support systems adapting to team states in the cockpit. To achieve this, it is your task to fully integrate our eye-tracking sensors into the simulator cockpit and build a measurement system that captures and analyses multiple data streams. Then, you will conduct an experiment with pilots to analyze the team dynamics in critical scenario in real-time.

Your tasks

- Review the literature about measurement of team behaviour in cockpit and other applications
- Integrate eye-tracking and implement real-time analysis software to track relevant metrics
- Design and conduct a study with pilots in the THI A320 simulator to evaluate the team dynamics in critical scenarios



Your Profil

- Studying Computer Science/Engineering (HCI, HMI)
- Interest in human factors in aviation
- Experience in software Python/C++
- Experience in measurement engineering

Kontakt

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