Supervisor assessment of Master's Thesis

Student: Ruta Dominik, Bc.

Title: Pilot proficiency classification from gaze (id 24569)

Supervisor: Chudý Peter, doc. Ing., Ph.D. MBA, DCGM FIT BUT

1. Assignment comments

The author addresses a complex task, with the attention carefully balancing between piloted experiments in a ground based research flight simulator and an actual pilot proficiency classifier design effort. A non-trivial data preprocessing, utilizing a well structured knowledge and understanding of gaze tracking, flight physics, flight deck instrumentation, operational procedures and communication using authentic phraseology, imposed additional requirements on the author's conceptual thinking and abstraction capability. Based on the previous conditions I consider the overall difficulty to be above average. In light of the associated challenges and reflecting the quality of delivered results, the author has accomplished respective thesis goals. The investigated topic is part of the research agenda addressed by the National Competence Centre for Aeronautics and Space supported by the Technology Agency of the Czech Republic.

2. Literature usage

The author conducted a dedicated research on the topic of pilot proficiency classification from gaze and subsequently utilized a range of references, all of which were content-wise related to the topic of the thesis. The author mastered to utilize published resources to successfully design and implement a pilot proficiency and maneuver classification cascade.

3. Assignment activity, consultation, communication

The author has shown an active attitude during his work on the thesis and demonstrated a high level of commitment in achieving a very good result. The author consulted regularly, was well prepared for meaningful discussions, and based on the meeting outcomes was able to draw individual conclusions and transforming them into an operational concept. Communication with the author was conclusive and punctual.

4. Assignment finalisation

Both, the text part and the implementation part of the thesis have been finalized in advance of the deadline and the content of the thesis has been examined. Minor modifications originating from the meeting discussions and periodic reviews have been included in the thesis.

5. Publications, awards

Unknown

6. Total assessment   **very good (B)**

The proposed grade reflects the author's overall activity and motivation throughout his entire work on the thesis, which gradually matured from a design concept to a full implementation of a pilot proficiency and maneuver classification cascade. Author's enthusiasm and skills are perfectly demonstrated in the achieved results which, along with the ability to design, coordinate and execute a fight simulator based test campaign, go beyond the mechanistic utilization of machine learning techniques. I recommend this thesis for defense. Suggested grade as based on the above mentioned: **Very Good** (**B**).

In Brno 2 June 2022

Chudý Peter, doc. Ing., Ph.D. MBA
supervisor