



BACHELOR THESIS TOPIC

Student: **Ivana Dukayová**
Student's ID: 115979
Study programme: process control
Study field: Cybernetics
Thesis supervisor: doc. Ing. Martin Klaučo, PhD.
Head of department: doc. Ing. Martin Klaučo, PhD.
Consultant: Ing. Patrik Valábek
Workplace: Department of Information Engineering and Process Control

Topic: **Touchless Drone Navigation via Hand Gestures**

Language of thesis: English

Specification of Assignment:

This thesis aims to propose and implement a system for classifying hand gestures for touchless drone control utilizing an embedded camera on the drone. The classification of such gestures relies on image processing from the drone camera and the application of machine learning models. The proposed solution must be sufficiently fast and robust to recognize changing gestures and execute the desired command accurately.

Subtasks:

1. implementation of machine learning models for gesture recognition and classification
2. verification of classification accuracy and quality
3. easy implementation of the proposed solution to the drone

Length of thesis: 40

Deadline for submission of Bachelor thesis: 05. 05. 2024

Approval of assignment of Bachelor thesis: 05. 03. 2024

Assignment of Bachelor thesis approved by: doc. Ing. Juraj Oravec, PhD. – study programme supervisor