VSB TECHNICAL | FACULTY OF ELECTRICAL | DEPARTMENT OF CYBERNETICS
|||||| UNIVERSITY | ENGINEERING AND COMPUTER | AND BIOMEDICAL ENGINEERING
|||| OF OSTRAVA | SCIENCE

VŠB – Technical University of Ostrava
FEECS, DCBE
17. listopadu 2172/15
708 00, Ostrava-Poruba, CZ
Prof. Ing., Dipl.-Ing. Martin Drahanský, Ph.D.

Supervisor's recommendation

Author: **Ing. Tomáš Goldmann**
            Faculty of Information Technology, Brno University of Technology
Title: **Research in the field of biometric detection and recognition of individuals using facial image data**
Supervisor: **Prof. Ing., Dipl.-Ing. Martin Drahanský, Ph.D.**

In 2015, Tomáš contacted me shortly after finishing his MSc. thesis at the Faculty of Information Technology, Brno University of Technology. He demonstrated considerable interest in the field of biometric research, which aligns with one of my primary research areas, particularly in computer vision and machine learning. Based on this shared interest, we agreed upon a potential dissertation topic centered on biometric-based face recognition. This selection of the research topic displayed notable ambition, given its demand for a wide-ranging skill set encompassing proficiency in software and firmware development, alongside a thorough comprehension of the intricate workings of relevant machine learning algorithms.

While exploring the topic, Tomáš encountered multiple challenges, which required him to gain insight into both biometrics and forensics to overcome them. Using the acquired knowledge, he dealt with both software implementation and hardware design of a device for 3D face capturing, which led to the authorship of a utility model. Alongside submitting publications related to his dissertation topic, Tomáš contributed to research in other biometric areas, such as hand-based biometry. He showcased his teamwork skills by participating in an international project to develop a novel fingerprint recognition device, which was presented at a trade fair in Dubai and subsequently patented.

Tomáš continues to play an active role in the research group STRaDe at FIT BUT, dedicating his time to supervising BSc. and MSc. theses, along with participating in lecturing activities. Additionally, he has been involved in several faculty projects, primarily centered around national security concerns.

Tomáš is an exceptionally driven and dedicated individual, with systematic approach to problem solving. During the time I had the pleasure of supervising him, he significantly expanded his range of skills, ranging from finer points of hardware design to comprehensive understanding of machine learning. He consistently demonstrated his capacity to address complex issues and contribute to the academic community through sharing his findings. I am confident that Tomáš fully satisfies the rigorous requirements for earning a Ph.D. degree.

Hereby, in conclusion, I recommend his work to defend and to award the Ph.D. title.

In Ostrava on 2024-MAR-24