

TFK programme, funded projects 2025

Project title: Bridging the Cyber Skills Gap: A Hackathon-Based Approach for Designing Cybersecurity Education	
Coordinator Turun yliopisto Mohammad Tahir, tahir.mohammad@utu.fi	As threats become more sophisticated due to the rise of AI, cloud computing, and IoT, the demand for skilled professionals has skyrocketed. The cybersecurity industry faces a talent shortage, exacerbated by the rapid pace of technological advancement. Addressing this requires investing in cybersecurity education to develop necessary skills. This can be achieved through continuous curriculum updates, essential to keep pace with the ever-evolving threat landscape and ensure graduates possess the skills employers urgently need. This TFK proposal aims to establish a cybersecurity education cooperation network connecting higher education institutions from Finland and Malaysia. The cooperation network will facilitate strategic knowledge exchange, teaching methodologies, and cross-cultural partnerships among cybersecurity educators and researchers. By leveraging diverse perspectives and expertise, participating institutions will co-develop curriculum enhancements, research opportunities, and industry connections that strengthen the cybersecurity talent pipeline in both regions. Through targeted mobility, collaborative teaching methodologies, and industry alignment, the proposed project aims to improve cybersecurity education and prepare graduates for the rapidly evolving threat landscape.
Partners Sunway University	In order to achieve this, key initiatives planned for the project include organizing hackathons in both countries to share expertise, formulate strategies for cybersecurity education, and pilot innovative teaching methods. These events will involve students specializing in cybersecurity from universities in both nations, as well as participation from local security industries to address concerns about skill shortages and future requirements. The insights gained from these activities will be used to improve cybersecurity education programs at the University of Turku, with plans to disseminate the project's outcomes to other stakeholders. Based on the planned activities, the anticipated results of the cooperation include fostering expert knowledge sharing, strategies, and best practices in cybersecurity education across both postgraduate and undergraduate levels. This collaboration will also strengthen Finnish higher education institutions by establishing strategic international partnerships, thereby enhancing their capacity to address the evolving demands of the cybersecurity field. Additionally, accessible cybersecurity learning resources, such as open-source labs and educational materials, to support existing programs at collaborating universities will be developed. The students will experience international exposure and diverse security approaches to enhance their competence in critical security domains and improve their employability in specialized roles.



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