

東洋大学長 殿
To the President of Toyo University

ウクライナからの研究員 研究報告書
Research Report by Researcher from Ukraine

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所属大学名・職名（身分） Affiliation and position name	State University “Kyiv Aviation Institute” (ex. National Aviation University), Dean of the Faculty of Computer Science and Technology
研究課題名 Research topic	Research of Quantum Technologies, Cryptography, Information Protection Systems
研究期間 Research period	年 月 日～ 年 月 日 From 2024/November/29 to 2024/December/9
研究協力教員氏名（所属） Research partner (affiliation)	Professor Masahiro Bessho, Faculty of Information Networking for Innovation and Design
研究成果発表 （予定も含む） Publication/Presentation (including future ones)	The publication of a scientific article in a scientific journal on Research of Quantum Technologies, Cryptography, Information Protection Systems is planned on April 2025. Presentation according to the Internship http://surl.li/mfmngs
研究成果の概要 Summary of your research achievements	<p>The aim of the visit was to study the experience of Japanese higher education, particularly focusing on the teaching and research practices at Toyo University, as well as Toyo’s approach to information technology education.</p> <p>A primary focus of the visit was to explore Toyo University's information infrastructure and corporate resources related to IT. This included analyzing how Toyo’s technological platforms support education, research, and administrative processes, as well as understanding their data management and cybersecurity protocols.</p> <p>In addition, the goal was to gain insights into the innovative methods of teaching IT-related courses at Toyo University, including the integration of emerging technologies such as artificial intelligence, machine learning, and cloud computing into the curriculum.</p> <p>The study involved investigating pedagogical approaches at Toyo University, with a special emphasis on the use of digital tools and e-learning platforms.</p> <p>To deepen the understanding of Japanese higher education in the field of IT, I:</p> <ul style="list-style-type: none">• Explored the history and evolution of Toyo University's IT

programs.

- Analyzed the range of IT programs and research projects, particularly those that focus on cutting-edge fields like cybersecurity, big data, and digital transformation.
- Examined collaborative efforts between Toyo University and industry, with a particular focus on how the university fosters innovation through partnerships with technology companies and research institutions.
- Studied strategies for attracting international students and faculty in the field of IT.
- Investigated the use of technology in education, specifically the implementation of innovative teaching practices and digital learning platforms.
- Identified current challenges and opportunities for growth within the Japanese higher education system, particularly in information technology, and how Toyo University addresses these challenges through its educational programs and research initiatives. Based on the results of the internship, it was agreed to hold training courses on topical issues such as Cyber Diplomacy, Artificial Intelligence in International Relations, Cyber Terrorism, and Cyber Warfare. Particular attention was paid to expanding opportunities for academic mobility, in particular short-term academic mobility for students, which will open new horizons for learning and exchange of experience between universities.

It was an important meeting with the Rector and Members of the Supervisory Board of Toyo University such as President of Toyo University Etsuko Yaguchi, Chancellor Shinji Fukukawa, Vice Presidents: Toshiya Aramaki, Takashi Sawaguchi, Hideaki Tada, Chairman of the Executive Board Takashi Anzai, and member of the Executive Board, Nobuyuki Terada.

It was necessary for me to visit to Faculty of Information Networking for Innovation and Design in Akabanedai Campus and meet with Department Chair and Professor Masahiro Bessho and Professor Takeshi Yashiro.

The research work with Toyo's professors was aimed to strengthen academic ties and explore potential collaborations in research and education. Faculty of Information Networking for Innovation and Design is renowned for its innovative approach to information networking and design, focusing on the integration of technology and creativity. The faculty emphasizes interdisciplinary education and research, preparing students for the dynamic demands of the technology sector.

Professor Bessho provided insights into various research projects currently underway, including advancements in network design and data communication. Discussions highlighted potential areas for joint research, particularly in the fields of artificial intelligence and cybersecurity. Professors discussed the innovative teaching methods employed at Toyo University, including project-based learning and

industry partnerships.

By implementing modern strategies, Toyo University and our Faculty of Computer Science and Technology can create a vibrant and mutually beneficial partnership that not only enhances educational experiences but also drives innovation and fosters international.

We investigated the teaching methods employed at Toyo University, focusing on innovative practices and the integration of technology in the classroom, examined recent research projects and publications from Toyo University, highlighting contributions to various fields and collaborations with other institutions or industries, studied initiatives aimed at attracting international students and faculty, including partnerships with foreign institutions and exchange programs, identify current challenges faced by Toyo University and the broader Japanese higher education system, such as funding issues, student recruitment, and competition. cooperation in the IT sector.

I reviewed the curriculum and course offerings at Toyo University, identifying unique programs or specializations that differentiate it from other institutions, analyzed student enrollment data to understand trends in program popularity and diversity, explored documents, and scholarly articles to understand the founding principles of Toyo University.

This internship helped me to build stronger academic ties between our institutions but also to facilitate future collaborative projects in the fields of IT education and research, which will contribute to the internationalization of higher education and drive technological advancements in both Japan and Ukraine.