太陽地球系科学分野データを活用した九州工業大学における数理・データサイエンス・AI 教育と取り組みに関する報告

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Activities on Approved Program for Mathematics, Data science and AI Smart Higher Education at Kyutech, using space weather data

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To strengthen the competitiveness of companies and achieve sustainable growth, it is necessary to fundamentally transform business models using data and digital technologies at the national level, and this transformation is called Digital Transformation (DX). As human resources responsible for this DX, the AI Strategy 2019 requires personnel who understand and can utilize mathematics, data science, and AI. To develop human resources with these skills, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) has established the "Approved Program for Mathematics, Data science and AI Smart Higher Education" (MDASH) to approve educational programs at universities, junior colleges, and technical colleges.

Kyushu Institute of Technology has received MDASH Literacy approval for its educational programs, which aim to produce highly skilled engineers who can apply and utilize their knowledge of mathematics, data science, and AI to a variety of specialized fields. As a specific example, we have held hands-on training workshops on machine learning for students and staff from across the university. In addition, the PBL (Project Based Learning) course for information engineering graduate students provides practical data science training, such as designing machine learning models and making inferential predictions using space weather data. Through the basic and specialized subjects offered in the lower and upper grades, as well as exercises and experiments, students can acquire the ability to apply their knowledge of mathematics, data science, and AI to their specific fields of expertise.