# COURSE DETAIL

| DATA SCIENCE |
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| **Country**<br>Japan |
| **Host Institution**<br>Tohoku University |
| **Program(s)**<br>Engineering and Science |
| **UCEAP Course Level**<br>Graduate |
| **UCEAP Subject Area(s)**<br>Computer Science |
| **UCEAP Course Number**<br>200 |
| **UCEAP Course Suffix** |
| **UCEAP Official Title**<br>DATA SCIENCE |
| **UCEAP Transcript Title**<br>DATA SCIENCE |
| **UCEAP Quarter Units**<br>3.00 |
| **UCEAP Semester Units**<br>2.00 |

**Course Description**

This data science course introduces essential techniques and tools used in Data Science. Each week the course covers a unique topic, starting from the very basics of the Data Science pipeline to advanced topics like Neural Networks and Time-Series Analysis, all explained using a sophisticated slides and easy-to-understand Python codes.

For this semester, the course will use a single comprehensive dataset that could cover all of the topics, to make it easier for students to understand the concepts of data science, without spending too much time understanding the dataset.

By the end of this course, students are expected to:

1. Understand the Data Science Pipeline.
2. Apply various machine learning techniques.
3. Evaluate model performance and fine-tune hyperparameters.
4. Understand and apply Neural Networks, Text Mining, and Time-Series Analysis.
5. Translate theory into practice using Python.

**Language(s) of Instruction**
English

**Host Institution Course Number**
N/A

**Host Institution Course Title**
MACHINE LEARNING BASICS

**Host Institution Course Details**

**Host Institution Campus**
Tohoku University

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| **Host Institution Faculty** |
| **Host Institution Degree** |
| **Host Institution Department** |
| **Course Last Reviewed**<br>2023-2024 |

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