Evaluating Language Performance with Machine Learning
(Conducted in Japanese)

Lecturer: **Yuichiro KOBAYASHI (Nihon University)**
Chair: **Akiyo HIRAI (University of Tsukuba)**

Date: October 6, 2024, 9:00–12:00 (with intermissions)
Venue: Building #2, 4th floor, Room 2-406
Fee: Free (1,000 yen for non-members)
Maximum number of participants: No limit
Application deadline: September 29th
Prerequisite: Participants are expected to be familiar with basic statistical knowledge such as correlation coefficients and regression analysis. The workshop will include a detailed explanation of machine learning with demonstrations using R. However, basic data handling in R is not required.

Objectives
1. Understand the evaluation of language performance using machine learning
2. Learn methods for analyzing language data using decision tree analysis and random forests
3. Understand important points of statistical language performance evaluations

Procedure
1. Automatic evaluation of language performance
    1. Automatic scoring of writing and speaking (theoretical framework)
    2. Learner corpus research (data construction, feature selection)
    3. Natural language processing (quantification of linguistic information)
    4. Machine learning (implementation of automatic scoring systems)
2. Examples of language performance evaluation
    1. Basics of machine learning (e.g., linear discriminant analysis, decision tree analysis, ensemble learning)
    2. Analysis examples with random forest classification
    3. Analysis examples with random forest regression
    4. Demonstration of machine learning using R
    5. Key considerations in applying machine learning to language performance evaluation
3. Questions and answer session

How to register
1. To register for the workshop, please go to the following website with the URL or QR code below and fill out the necessary information.
   URL: https://forms.gle/vNLSSjitjHC5twEu5

2. If there is a problem with online registration, applicants are also accepted by email to Yusuke KUBO (Fukuoka University) at kuboy(at)fukuoka-u.ac.jp

Let us know the following information when you register for the workshop.
(1) Your name, affiliation, and email address
(2) Reason(s) for participating in this workshop
(3) Questions for the instructor, if you have any (Optional)