Syllabus 2019 Computer and Mathematical Sciences

Intelligent Systems Science

Basic information

- **held this year:** yes
- **instructor(s):** Prof. Ayumi Shinohara, Assoc. Prof. Ryo Yoshinaka
- **room:** GSIS 2F Lecture Hall
- **schedule:** The first half year (Thursday) 8:50-10:20
- **begins on:** 04/11

Objectives and outline

In this lecture, we deal with machine learning, which is one of the central research topics of intelligent systems. We mainly focus on the theoretical approaches based on computational complexity and formal language theories, both from basic and practical view points.

Class plan

1. Probably Approximately Correct Learning
2. Reductions
3. Occam's Razor
4. Vapnik-Chervonenkis Dimension
5. Weak-learning and Boosting
6. Exact Learning via Queries
7. Applications of Machine Learning

Evaluation

Evaluation will be based on report, discussion and attendance.

Textbook(s)

References:

Web site

http://www.shino.ecei.tohoku.ac.jp/~ayumi/indexE.html

Office hours

Please make an appointment. E-mail address: ayumi@ecei.tohoku.ac.jp

Other information