Statistical learning 2

ECTS : 4

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Langue du cours : Français

Volume horaire : 39

Description du contenu de l'enseignement :

We will cover the following topics in this course:

- Least squares regression
- Ridge regression
- LASSO
- PCA
- Kernel methods

Compétences à acquérir :

The goal of this course is to get acquainted with the mathematics behind the classical machine learning algorithms.

Pré-requis obligatoires

- Linear algebra
- Basic probability

Mode de contrôle des connaissances :

- 25% Midterm exam
- 75% Final exam

Bibliographie, lectures recommandées :

The material in this course takes inspiration from the following excellent ressources:

- Bach, Francis. Learning theory from first principles. MIT press, 2024.
- Hastie, Trevor, et al. The elements of statistical learning: data mining, inference, and prediction. Vol. 2. New York: springer, 2009.
- Murphy, Kevin P. Machine learning: a probabilistic perspective. MIT press, 2012.
- Wasserman, Larry. All of statistics: a concise course in statistical inference. Springer Science & Business Media, 2013.

Document susceptible de mise à jour - 04/11/2026

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