

Mathematics and Machine Learning: At the interface of Statistics and Computer Science, Data Science is becoming a fast-growing field with lots of demands in both industry and academia. This course introduces fundamental aspects of data science with main focus on algorithms for statistical machine learning and data mining. Specifics topics include linear and non-linear, supervised and unsupervised regression and classification methods, such as logistics regression, discriminant analysis, k-nearest neighborhood, decision trees, bagging, and boosting. Dimension reduction techniques are also presented. The computational and statistical aspects of the algorithms will be addressed with real world applications and case studies.

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