Introductor Applied Machine Learning

School of Informatics, University of Edinburgh

Instructor: Dr. Nigel Goddard

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Assessment is by formal examination (75%) and two equally-weighted assignments together worth 25%. The assignments will be released in weeks 5 and 9, and will be due at the end of weeks 6 and 10 respectively.

Online material is available at http://www.inf.ed.ac.uk/teaching/courses/iaml.

Resources: The course textbook is "Data Mining: Practical Machine Learning Tools and Techniques" (Second/Third Edition) I.H. Witten and E. Frank, Morgan Kaufmann, 2005/2011.

Tutorials and Labs: There will be 4 tutorials and 4 labs classes for the course, in weeks 3,5,7 and 9. There will be no labs or tutorials in weeks 1 and 2.

Syllabus Note: this list is provisional

- Introduction

- Thinking about data

- Basic probability

- Naive Bayes classication

- Nearest-neighbor methods

- Decision trees

- K Nearest Neighbours and KD-Trees

- Linear regression

- Generalization

- Logistic regression, perceptrons

- Support vector machines

- Dimensionality reduction

- Clustering (k-means, hierarchical)

- Mixture models and the EM algorithm

- Performance evaluation