

MLPR Preliminaries

Machine Learning and Pattern Recognition

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(These slides, and all slides throughout the course, are based on earlier slides from David Barber, Amos Storkey and Charles Sutton.)

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Welcome

to the Machine Learning and Pattern Recognition Course

Administration

- ▶ See website
<http://www.inf.ed.ac.uk/teaching/courses/mlpr/>
- ▶ Lectures 10.00 - 10.50 Tuesday and Friday AT LT1
- ▶ Office hours: Starting next week, time TBC
- ▶ 7 tutorials: Start Monday of Week 3.
- ▶ Assignment (20% total). Due Tues 18 Nov 4pm.
- ▶ Exam (80% total)

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Welcome

to the Machine Learning and Pattern Recognition Course

This is one of many machine learning courses in Informatics.

Other courses:

- ▶ Introductory Applied Machine Learning
- ▶ Probabilistic Modelling and Reasoning
- ▶ Information Theory
- ▶ Reinforcement Learning
- ▶ Data Mining and Exploration
- ▶ Neural Information Processing

MLPR's focus is on a principled probabilistic formulation, cf IAML which is more about a toolchest of algorithms. MLPR more mathematical.

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Books

- ▶ Main book: *Machine Learning: A Probabilistic Perspective* Kevin P. Murphy, MIT Press, 2012.
- ▶ *Bayesian Reasoning and Machine Learning*, David Barber, Cambridge University Press 2012, is also good (online free)
- ▶ Extra book suggestions online for keeners.

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Discussion Site

- ▶ Discussion board <http://nb.mit.edu/>
- ▶ Comment on any of the slides
- ▶ If you ask me a question via email, I will answer on the site. (Confidential questions excepted.)
- ▶ Download the lecture slides from NB
- ▶ Sign up link via email, or on MLPR course web site

Maths and MLPR

- ▶ MLPR will involve a significant number of mathematical ideas and a significant amount of mathematical manipulation
- ▶ MLPR will involve the use of Matlab. Use the tutorials. <http://www.mathworks.co.uk/access/helpdesk/help/techdoc/>
- ▶ Try not to get left behind: talk to one another, ask questions, read up
- ▶ Learn from one another: you are your own greatest resource!
- ▶ Beware. Many people find this course tough. If you take this course without the background skills, you may be setting yourself up to fail
- ▶ All resources regarding the course are online. You are the only one who can assess if you are up to it!
- ▶ Try Tutorial: Background Work sheet

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Excerpts from Previous Course Evaluations

- ▶ “Its one of the best courses I have taken !!!”
- ▶ “Be prepared to work for it.”
- ▶ “Don’t try to study this completely on your own, it really helps to go through the material with others.”
- ▶ “so many things... first off if you are not very good at maths, you should probably not take this course. . . . seriously though, if you are not very good at maths, this course is not for you.”
- ▶ This is indeed a fairly mathematical course. The difficulty between this course and all other courses offered by the School of Informatics (except PMR) is enormous. Take it if you are indeed interested in the matter and prepared to spend hours figuring out the maths.
- ▶ “Also the Nota Bene discussion site helps a lot and don’t be afraid to use it!”

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