MLPR welcome and advice

Welcome to MLPR! We’re your lecturers, Iain Murray and Arno Onken. You can email us directly: i.murray@ed.ac.uk and aonken@inf.ed.ac.uk. (There are multiple Iain Murray’s at the University; please use the email addresses given here.) However, if at all possible post your question to the hypothesis class forum instead.

Machine Learning is growing in importance as a tool for other fields and in industry, and there’s a lot of fun stuff in this course. We hope you’ll enjoy it. However, this isn’t the right course for everyone. This course isn’t necessary to apply machine learning, it’s building up technical expertise towards being able to research new machine learning methods. If you’re mainly interested in picking up some machine learning tools, you should take a more applied course.

1 Course selection advice

If you haven’t taken Introductory Applied Machine Learning (IAML), or a course like it, consider taking that instead of MLPR. Every year some students take MLPR without the required background (often the maths background) and then fail it. Don’t be one of these students! Take a look at the maths and programming self-test and notes on the course website, and ask yourself honestly whether this is material you understand.

If you are an Informatics undergrad student, this course reviews some of the same material as Inf2B Learning and IAML, but will be more technical. (Neither course is a pre-requisite.) If you didn’t enjoy those courses, you should avoid MLPR! If you did like them, this course should reinforce and then extend that material.

Don’t take both IAML and MLPR at the same time. Undergraduates should space out the material to get full benefit. MSc students should get more breadth out of a one-year programme, and study an application area of machine learning or other fundamentals in informatics. See the MSc guidance on machine learning related courses for ideas. You’ll have a broader set of projects available, and you’ll have more to talk about at the end of your studies.

Machine Learning Practical (MLP), for those eligible, is a great course for spending more time on advanced practical skills. It is only a narrow part of machine learning though. Only take MLP if you are taking one of IAML and MLPR, or have already taken one of these or a similar broad machine learning course.

If you’ve already enrolled in MLPR, don’t be afraid to change your course selection. Keep an open mind about whether you should really be taking the course, and don’t be embarrassed to change if you find you don’t have the required background. You’re meant to finalize courses by the end of week 2. You cannot drop a course after week 6.

2 Notes

You should take your own notes while working through the materials. Especially anything that surprises you, or anything that you should work through with other students later. Taking notes while watching a video is easier than in a live lecture, because you can pause at any time. Trying to summarize the points being made makes sure that you are actively engaged with the content.

Despite our best efforts, our notes will contain some mistakes and unclear parts. Please use the hypothesis class forum, a web-based annotation tool. You can quickly highlight any part of the notes that need fixing or clarifying. Don’t be afraid to be picky, We want to fix mistakes of any size (including typos) that might confuse others. We are also more than happy to expand on the material where student discussion reveals it’s necessary.
We give pointers to textbooks where reviewing the material from another point of view may be useful. However, except where stated as part of an exercise, we’re only expecting you to be familiar with the material we cover in the materials provided.

Some material in the notes is marked either “non-examinable” or “for keen students”, which means we’re not expecting you to study this material, but hope some of you will find it interesting. That said, you will be expected to be able to generalize your knowledge to models and machine learning problems that you haven’t seen. If you have read advanced topics, and outside the course materials, that might be easier.