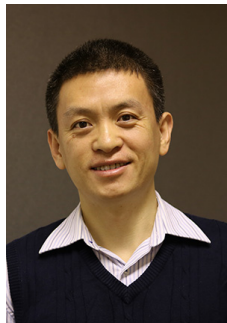# COM4509/6509 Machine Learning and Adaptive Intelligence

Department of Computer Science,
The University of Sheffield

Instructors

Dr. Mauricio A. Álvarez
(Module leader)

Dr. Haiping Lu

Teaching assistants (I)

Fariba Yousefi

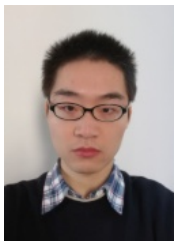

Hardy Hardy

Juan-José Giraldo

Yan Ge

Teaching assistants (II)

Shuo Zhou

Senee Kitimoon

Chao Han

Nada Yehia

Content of the module

Week	Starting	Subject	Lecturer
1	Sept 24	Intro. to ML and Review of Probability	MA
2	Oct 1	Objective functions	MA
3	Oct 8	Linear regression	MA
4	Oct 15	Basis functions	MA
5	Oct 22	Generalisation	MA
6	Oct 29	Bayesian regression	HL
7	Nov 5	Unsupervised learning	HL
8	Nov 12	Reading week	
9	Nov 19	Naive Bayes	HL
10	Nov 26	Logistic regression	HL
11	Dec 3	Other topics	HL

Assessment (subject to Departmental coordination)

❏ Assignments

Assign.	Subject	Release date	Handle in	%
1	Intro. to Python and Review of Prob.	Sept 24	Oct 5	3
2	Objective functions	Oct 1	Oct 12	5
3	Linear regression	Oct 8	Oct 19	5
4	Basis functions	Oct 15	Oct 26	5
5	Generalisation	Oct 22	Nov 02	5
6	Bayesian regression	Oct 29	Nov 09	5
7	Unsupervised learning	Nov 5	Nov 23	7
			Total	35%

❏ MOLE quiz (Dec 5), 15%.
❏ Final Exam (Date:TBA), 50%.

Marking and Feedback

- Demonstrators responsible for marking

Assign.	Subject	Markers
1	Intro. to Python and Review of Prob.	Hardy Hardy, Nada Yehia
2	Objective functions	Shuo Zhou, Yan Ge
3	Linear regression	Juan-José Giraldo, Chao Han
4	Basis functions	Nada Yehia, Senee Kitimoon
5	Generalisation	Shuo Zhou, Chao Han
6	Bayesian regression	Juan-José Giraldo, Senee Kitimoon
7	Unsupervised learning	Hardy Hardy, Yan Ge

- As a department we aim to return all assessed work within three weeks (unless that period involves a vacation, in which case it is five) after submission.

We will use MOLE for:

- ❑ sharing course material.

- ❑ a discussion board.
    - The discussion board IS for:
        - ▶ asking general questions about the contents of the lectures.
        - ▶ *clarifications* about the assignments.
        - ▶ if you know the answer to somebody else's question, please answer. Help your peers!
    - The discussion board IS NOT for:
        - ▶ asking how to solve the assignment.
        - ▶ give the solution to what is being asked in the assignments.

- ❑ Only email the Module leader if you have personal questions or issues. Otherwise, please use the discussion board.

- ❑ **Please, be professional and polite**.

Discussion board management

Demonstrators responsible for managing the discussion board

Assign.	Subject	DB Manager
1	Intro. to Python and Review of Prob.	Hardy Hardy
2	Objective functions	Shuo Zhou
3	Linear regression	Juan-José Giraldo
4	Basis functions	Nada Yehia
5	Generalisation	Chao Han
6	Bayesian regression	Senee Kitimoon
7	Unsupervised learning	Yan Ge
9, 10, 11	Naive Bayes, logistic regression, other topics.	Fariba Yousefi

About the lab sessions

- ❏ You will need a GitHub account to access the labs. You can open one freely at https://github.com/.

- ❏ Go to the Lab Session that appears in your personal timetable. If your timetable says you have a Lab Session on Monday, go to that one. Otherwise, go to Wednesdays.

- ❏ Please, check the computer room for each week. There are slight variations in times and places.

Slides and Lab Notebooks

We will use the material originally developed by Prof. Neil Lawrence. The slides for the Lectures and the Lab Notebooks are in
http://inverseprobability.com/mlai2015/.