

## CM20252 & CM50263 Artificial Intelligence

### Coursework 4

Özgür Şimşek

**Date set:** 1 April 2019

**Date due:** 7 May 2019, 11:00 am

**Total marks:** 100 (This coursework will determine 5% of your mark for the unit.)

**Where to submit:** CM20252 Moodle page

**What to submit:** Completed Jupyter notebook (.ipynb file)

You will be given a Jupyter notebook to work with. You must follow the instructions on this notebook and submit this particular notebook.

**Late submissions:** We will follow the university policy on late submissions.

Coursework submitted after the deadline will receive a maximum mark of 40 (out of 100).

Coursework submitted after five working days will receive a mark of zero.

**Feedback:** Within two weeks of the submission deadline, your Jupyter file will be returned to you (via Moodle), showing the marks you received from each part of the coursework. You can get additional feedback from the unit leader or one of the tutors via appointment.

You are required to work individually.

This coursework will be marked anonymously. Please do not include any identifying information on the files you submit.

Do not plagiarise. Plagiarism is a serious academic offence. For details on what it is and how to avoid it, please visit the following webpage:

<http://www.bath.ac.uk/library/help/infoguides/plagiarism.html>

### What you need to do

You will develop a classifier given a set of training instances (called the training set). Your classifier will be evaluated on a different set of instances (called the test set). Please note that the test set will not be available to you while you are developing your classifier. In addition, you will not know what the best possible level of performance is.

To develop your classifier, you are welcome to use any algorithm you find suitable and make use of existing machine learning libraries. One of your options is to develop a Naïve Bayes classifier, similar to the one you developed in Coursework 3. Your mark will depend only on how well your classifier performs on the test set. The best performing classifier(s) submitted for this coursework will receive 100 marks. A good implementation of Naïve Bayes will receive 60 marks. Other classifiers will be marked using these two anchor points (linear interpolation).

Additional details are provided in the Jupyter notebook. You must follow the instructions in the Jupyter notebook precisely.