

## CISC Introduction to Machine Learning

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## **Project Description**

In this project, you will **design** and **solve** your own machine learning task.

A good project is one that applies one or more machine learning algorithms covered in class, in **novel** ways to a dataset.

The project also provides you with a unique opportunity for exploring one or more areas of machine learning that we did not cover in depth. Some examples are graphical models, collaborative filtering, inductive logic programming, topic models and deep learning.

If you want to tie the class project to your research project, you are strongly encouraged to do so.

A project proceeds with:

- 1. Select a publicly available dataset.
- 2. Design a reasonable machine learning task.
- 3. Choose appropriate machine learning algorithms.
- 4. Display and analyze your results.

### **Project Submission**

Please submit via Canvas:

- (a) Project Proposal. 10% of the project grade.
- (b) Project Report and Code. 90% of the project grade.

#### **Important:**

Read HERE for how to write a proposal.

Read HERE for how to write a report.

You are encouraged to use the template on Canvas to format your proposal and report.

### **Datasets**

UCI machine learning repository or other online resource.

# Sample topics and reports

- Carlos Guestrin's class at CMU
- Goeff Gordon's class at CMU
- Ray Mooney's class, UT Austin
- Andreas Krause's class, Caltech
- Project reports from Andrew Ng's class 2011.

<sup>\*</sup> The above links also contain available datasets.