# Machine Learning Review

University of Glasgow

### Molin Liu

December 15, 2019

## Introduction

This is a review work for the Machine Learning course in University of Glasgow.

## 1 Regression

### 1.1 Overview

For  $x = (x_1, x_2, ..., x_d)$ , where  $x_i$  is the  $i_{th}$  attribute of x, a lenear model tries to train a linear combination function from these attributes, i.e:

$$f(x) = w_1 x_1 + w_2 x_2 + \dots + w_d x_d + b$$

which can be written in vector as:

$$f(x) = w^T x + b$$

where  $w = (w_1, w_2, ..., w_d)$ .