## ACS234 Maths and Data Modelling

Tutorial 6
Wednesday 1pm online

## Done in Lecture (week 6/7)

General Linear Models

## **General Linear Models**

There are three components to any GLM:

- Random Component: noise model or error model.
- Systematic Component the linear predictor  $~\eta=Xeta$
- Link Function,  $\eta$  or  $g(\mu)$  specifies the link between random and systematic components.  $E[Y] = g^{-1}(X\beta)$

General linear model (GLM) includes multiple linear regression.

**Example - logistic regression** 

$$X\beta = \ln(\frac{\mu}{1-\mu}) \qquad \mu = E[Y]$$

## **Exercice 1**