# Lab Exercise 7: Logistic Regression

## Step 3

### Part 2

Survey.csv contains 750 responses to the survey.

### Part 3

To determine the probability that someone will buy the product at a certain price based on income and age.

## Step 5

### Part 2

As Age increases, the log odds of Purchase (vs no-Purchase) increases by 0.03506.

### Part 3

Purchase decision at Price of 30 compared to Price of 10 decreases the log odds of admission by 2.21028.

## Step 9

### Part 7

The value for AUC is 0.915272

### Part 9

The area under the curve indicates how well the model predicts. Ideally, te best result would be 1. But an acceptable threshold can be chosen from this graph.

## Step 10

### Part 3

As the price rasises, the probability of purchase drops steeply (0.6707, 0.4918, 0.1826 respectively).

## Step 13

### Part 2

There are a total of 10 samples in the random set where 7 of them qualify for special offer (Prob > 0.5).