**Project 3 Write-up**

**Data Representation:**

The diagram is represented as a matrix ,where represents the color of the wire at the row and column in the grid, where:

Whether or not a diagram layout is dangerous is represented as a binary number:

for **not** **dangerous** and for **dangerous**

**Logistic Regression Model:**

Input:

Output:

Model Space:

Loss Function (Binary Cross-Entropy Loss with L2 Regularization):

Gradient Derivation

Training Algorithm