* [Overview](#gjdgxs)
* [Introduction](#30j0zll)
* [Assignment](#1fob9te)
  + [Notes about the data](#3znysh7)
* [Teacher's Solution](#2et92p0)

# CSE 450 - Machine Learning & Data Mining

## Exploration 04: Congressional Votes

 [*Photo by Louis Velazquez on Unsplash*](https://unsplash.com/photos/XWW746i6WoM)

## Overview

In this data exploration, you will:

* Perform some probability calculations.

Throughout this exploration, when you're asked to use a new function or library, we'll usually provide a link to that function's documentation, or a tutorial related to it.

## Introduction

As with our previous data explorations, this assignment uses [Google Colab](http://colab.research.google.com). For more information on using Google Colab, including how to submit assignments with it, please see the information in [Data Exploration 01](http://docs.google.com/exploration-01.html)

## Assignment

A [political think tank](https://en.wikipedia.org/wiki/Think_tank) is preparing a public relations campaign on a variety of policy issues.

In order to understand how they should best allocate their time, they've asked you to calculate some probabilities based on prior Congressional voting history.

### Notes about the data

Each column in the dataset other than class records how a congressional representative voted on a particular piece of legislation. These votes are coded as:

* Y - Voted yea (in favor of passage)
* N - Voted nay (against passage)
* ? - Abstained

To find more information on a particular piece of legislation, try googling for 1984 congress <column name>, such as:

1984 congress mx-missile

Which brings up [this New York Times article](https://www.nytimes.com/1984/05/15/us/issue-and-debate-mx-missile-faces-another-test-in-congress.html) as the first result. Though, the most relevant result may not always be the first one listed.

Click on the Open In Colab button below to open a Google Colab notebook with the template for this assignment. Once you've completed the assignment, don't forget to take the corresponding quiz in Canvas.



## Teacher's Solution

Once you have absolutely exhausted all of your best efforts in solving the data exploration problems, and you are stuck on where to go next, you can [view the teacher's solution here](https://github.com/byui-cse/cse450-course/blob/master/notebooks/Exploration_04_Solved.ipynb).