Capstone Project Ideas

1. **Fake News Detection**
2. **Driver Drowsiness Detection System**
3. **Grocery sales prediction**
4. **Fake News Detection:**

Nowadays most fake news is rumored around us, and we can’t trust the new whether it is fake or real which is spread over by social media,

To encounter this thing, I have come with an idea of detecting the fake news and real news.

### We use TF and IDF which is termed as TfidfVectorizer a. TF(Term Frequency): The word which occurs number of times in a document is referred as TF.

### A higher value means a term appears more often than others, and so, the document is a good match when the term is part of the search terms.

### b. IDF (Inverse Document Frequency): Words that occur many times a document, but also occur many times in many others, may be irrelevant. IDF is a measure of how significant a term is in the entire corpus.

### We use Passive Aggressive algorithms it is an algorithm that remains passive for a correct classification outcome, and turns aggressive in the event of a miscalculation, updating and adjusting. Unlike most other algorithms, it does not converge.

### Using sklearn, we build a TfidfVectorizer on our dataset. Then, we initialize a PassiveAggressive Classifier and fit the model.

**2.Driver Drowsiness Detection System:**

To gather the images from webcam we will be using Open CV and and implement them into Deep Learning model which will determine whether the person’s eye is Open or Closed.

1. Take the image input of user from camera
2. Create a Region of interest (ROI) detecting the face image
3. Detect the eye from ROI and feed it into classifier
4. Classifier will check if the user’s eye is open or closed
5. And calculate the scores to check if user is drowsy and play the alarm sound.

**3.Grocery sales prediction:**

Predicting the sales of Grocery store products with the help of old data and with the help of ML.