**News Category Prediction**

**Task :** Given the heading and description of a news item, predict the news category

**Example :**

Heading: What To Watch On Hulu That’s New This Week

Description: You're getting a recent Academy Award-winning movie

Category : ENTERTAINMENT

**Steps to use API :**

1. In the root folder, run the following commands to setup environment:
   1. conda create -n leadiq\_ml
   2. conda activate leadiq\_ml
   3. pip install -r requirements.txt
2. In the root folder, run the following commands to start the flask server:
   1. python app.py
3. With the server running, you can use the following command to predict category:
   1. *curl -d ‘{“headline”:<headline>,”desc”:<desc>” -H “Content-Type:application/json” -X POST http://127.0.0.1:5000/todo/model/*
   2. Input : A json having the following fields:
      1. short\_description : string
      2. heading : string
   3. Output : A JSON having the following fields:
      1. Category : string
   4. Example:
      1. *curl -d '{"headline":"LOOK: Pope John XXIII Through The Years","desc":""}' -H "Content-Type: application/json" -X POST* [*http://127.0.0.1:5000/todo/model/*](http://127.0.0.1:5000/todo/model/)
      2. Output : { "Category": "RELIGION” }

**Model Info**

Dataset :

Total of ~125k datapoints

80/20 Train-Test split

Model :

Deep Learning model using *Bag-Of-Words* scheme, having the following layers:

1. Input Layer – Count based vector of the input heading + description
2. Dense Layer – Having 100 neurons, Activation Function - ReLU
3. Output Layer – Having 31 neurons, one for each class, using Softmax activation function

Metrics:

Number of Epochs in Training : 20

Train Accuracy : 75.6%

Test Accuracy : 58.9%