**Soft Computing (PECCS601B) Project**

***Project 1:***

We often do you get stuck thinking about the name of a dog’s breed. There are many dog breeds and most of them are similar to each other. Can we use a dog breeds dataset and build a Deep Learning model that will classify different dog breeds from an image. Use Convolutional Neural Networks to build the model.

Link of Dataset: https://www.kaggle.com/c/dog-breed-identification

***Project 2:***

Build a model that can classify the genre of music using neural networks. You would need to extract information from the audio samples such as spectrograms, MFCC, etc. and then use a model to classify the music genre.

Link of Dataset: https://github.com/mdeff/fma

***Project 3:***

A type of yellow journalism, fake news encapsulates pieces of news that may be hoaxes and is generally spread through social media and other online media. This is often done to further or impose certain ideas and is often achieved with political agendas. Such news items may contain false and/or exaggerated claims, and may end up being viralized by algorithms, and users may end up in a filter bubble.

Build a Deep Learning model using LSTM cells to detect fake news.

Link of Dataset: https://drive.google.com/file/d/1er9NJTLUA3qnRuyhfzuN0XUsoIC4a- \_q/view

***Project 4:***

In project, we will be talking about predicting the returns on stocks. This is a very complex task and has uncertainties. You need to develop a model that will learn how to predict stock price using the LSTM neural network.

Link of Dataset: https://data-flair.training/blogs/download-tata-global-beverages-stocks-data/ ***Project 5:***

Every retailer must stay on top of planning activity to stand the demand of goods based on needs.

A highly accurate demand forecast is the only way retailers can predict which goods are needed for each store location. This will also ensure high availability for customers while maintaining minimal stock risk and support capacity management, store staff labour force planning, etc.

The project will use LSTM, which is very suitable for handling time-series data and widely used for forecasting purposes.

Link of Dataset: https://www.kaggle.com/c/demand-forecasting-kernels-only/data