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| **PROJECT OVERVIEW STATEMENT** | **Project Name:**  V’s Learner (still working on a better name) | | **Student Name: V Sai Pranav** | |
| **Problem/Opportunity:** | | | | |
| Right now, the problem is figuring out how to become more familiar with neural networks, which are essentially related to what's happening in Deep Learning. So, my focus is on finishing my capstone project using Deep Learning approaches using Keras (which runs on TensorFlow) or TensorFlow. This is my first experience with Deep Learning. | | | | |
| **Goal:** | | | | |
| The main purpose of this project will be to focus on one of the tasks related to Deep Learning and developing a model or a neural network and identifying the understanding of the model by building layers, as described in the 'Specific' side heading below. Furthermore, predicting the outcome by providing the test dataset and testing the testing model's correctness can be included.  **Specific**. To work on classification, regression, or computer vision problems using Tensorflow(Deep Learning).  **Assignable:** V Sai Pranav.  **Realistic**. With the available model, one can enhance the idea and transform it into a website (usually for predictions).  **Time-related:** Somewhere around mid-November. | | | | |
| **Objectives:**   * An outcome. Getting familiar with Deep Learning (DL) since I did not take any DL courses during my Master’s | | | | |
| * The First step will be to get the dataset and then based on that one of the tasks will be chosen if the target is continuous value regression or if it has binary values then categorical else a computer vision task. * Next step will be to Clean or preprocess the data if needed. Then build different layers in order to fit the model * Epoch (consider it as iteration) is one of the important parameters which gives us better results on increasing the number of epochs meaning increasing the accuracy. * Above mentioned are the objectives that will be the focus of this project, minor changes will be implemented if needed. * A time frame: Somewhere around mid-November. * A measure: For Classification: Accuracy class, Binary Accuracy Class, etc. and For Regression: MSE, RMSE, etc.. * An action: The objective will be submitted in the Jupyter notebooks. The programming language used will be Python | | | | |
| **Success Criteria:** | | | | |
| In this criterion main concentration will be on the accuracy measure specific to the task, the higher accuracy better the model is. Another measure that can be considered is a loss function. Minimum loss means a better model. | | | | |
| **Assumptions, Risks, Obstacles:** | | | | |
| The primary concern, for now, is finding the right dataset and then loading it into the tensors so that it can be in an understandable format for neurons. Next Preprocessing the data and finding the best parameters by performing Hyperparameter tuning which is one of the techniques offered by Keras needs attention. | | | | |
| **Prepared By** | **Date** | **Approved By** | | **Date** |
| V Sai Pranav | 9/21/22 |  | |  |