**Division Sigma’s Competition Problem**

Division Sigma follows a problem-based hackathon model. Participants must solve a specific competition problem using an AI model. This division is designed for experienced programmers. Some prerequisites are introductory algebra, fluency in English, fluency in at least one programming language.

The specific competition topic for Division Sigma is **Sentiment Analysis**. Each participating team should program an AI model that predicts the sentiment of a given sentence. For simplicity, there are only two sentiment options: all sentences demonstrate either a **positive sentiment** (represented by “1” in the datasets) or **negative sentiment** (represented by “0” in the datasets).

Each team will receive two sets of data, one for training and one for judging. The **training dataset (training\_data.csv)** includes both the sentences and their corresponding sentiments, otherwise known as features and labels. However, the **judging dataset (contestant\_judgment.csv)** contains only the sentence. Therefore, the goal of the competition for each team is to program a model that best predicts the sentiment of the judging data. Note that ID and User values in the datasets are only for identification purposes.

More specifically, after a team constructs a model, it should first use the training dataset to train its model, then use the trained model to predict the integer sentiment labels (either 0 or 1) for each sentence in the judging dataset. The team must also **record the predicted sentiment of all sentences** in the exact order that they are provided w.r.t to the ID. They must record these predicted sentiments in **CSV (Comma-separated Values)**. For submission, each team must submit both **the source code and the predicted sentiment CSV file**.

Teams participating in this division must submit their solutions strictly before the competition deadline in order for the solutions to be evaluated. Make sure to carefully read the competition rules and guidelines before you start coding.

For clarifications, the submission folder should include the following files:

1. Ipython notebook/ python file of the project
2. A CSV file containing the predicted labels.

The submission folder must be uploaded onto the github repository.

**Good Luck!**