Member Responsibility Matrix - GroofGroof

Deliverable/Task	Description of Work	Team Member Responsible
Project Planning	Defining the research scope, choosing MentalBERT, identifying the need for suicide/non-suicide detection, forming objectives, and planning methodology including fine-tuning, Random Search, Grid Search, and evaluation.	**Almazan**
Data Collection	Locating the "Sentiment Analysis for Mental Health" Kaggle dataset, filtering only *Normal* and *Suicidal* labels, analyzing dataset structure (ID, Status, Statement).	**Tejada**
Data Preprocessing	Performing cleaning steps: removing URLs, punctuation, casing, special characters, stopwords, and creating processed columns (original, statement, tokens, char count, sentence count). Tokenizing with MentalBERT tokenizer.	**Pajanustan S.**
Environment Setup	Setting up HuggingFace API access for MentalBERT, configuring Trainer, enabling W&B logging, organizing Colab/local environment, preparing GPU runtime.	**Almazan**
Fine-Tuning Base Model Experiments	Running 10+ baseline experiments for each member. Adjust learning rate, weight decay, epochs, scheduler, and logging steps. Produce evaluation metrics, logs, and performance notes. **Almazan:** LR, weight decay, epochs **Tejada:** Schedulers, logging steps **Pajanustan:** Save strategy, LR, epochs	**All Members (Individual Experiments)**
Random Search Hyperparameter Optimization	Running randomized hyperparameter sampling (learning rate, weight decay, epochs, save strategy). Selecting best trial per member and evaluating using accuracy, precision, recall, F1-score.	**Almazan, Pajanustan, Tejada**
Grid Search Hyperparameter Optimization	Testing systematic combinations of fixed hyperparameter values. Running all possible combinations, comparing metrics, and selecting best-performing configuration.	**Almazan, Pajanustan, Tejada**
Final Model Selection & Interpretation	Comparing best models across members (base, random search, grid search), analyzing losses, F1-score trends, comparing member performance (Tejada best among base models; Almazan best in tuning).	**Tejada & Almazan**
Inference & Prediction Testing	Running the fine-tuned models on sample text. Comparing outputs on Normal vs Suicidal statements. Analyzing confidence levels and misclassification on ambiguous texts.	**Pajanustan S.**
Final Documentation & IEEE Paper Writing	Writing entire research paper: Introduction, Dataset, Methodology, Experiments, Results, Conclusion, Tables, Figures. Integrating logs, graphs, metrics, and interpretations.	**All Members**