**Title of the Project :** PEERHIVE - A THREE-ZONE SYSTEM FOR CLASSIFYING

TEXTUAL EMOTION STATES

**Name of the Students :** Jason David Moses S & Gnyanprakhash M

**Register Number(s) :** 211423104241 & 211423104169

**Name of the Guide :** Mr P.ALWIN INFANT M.Tech.,(Ph.D)

**ABSTRACT**

The increasing prevalence of mental health discussions on social media platforms presents a valuable opportunity for the automated identification of distress indicators like burnout. Monitoring student well-being is crucial, yet traditional methods often lack scalability or rely on self-reporting. While generic emotion classifiers exist, they often fail to capture the specific, contextually relevant nuances differentiating transient stress from the persistent states indicative of burnout.  
  
 To address this, this study proposes a novel three-zone framework (Calm, Stressed, Overwhelmed) designed to categorize user-generated text along a burnout-relevant spectrum. This schema offers a more targeted lens than standard emotion labels. We demonstrate this approach by mapping the 28 fine-grained emotions from the large-scale GoEmotions dataset. This reclassification yielded a tailored dataset but highlighted a significant class imbalance, with Calm heavily dominating.  
  
 Using this reclassified data, a DistilBERT transformer model was fine-tuned. Recognizing the class imbalance, a weighted cross-entropy loss function was implemented to ensure the model adequately learned features from the critical minority classes (Stressed and Overwhelmed). The model achieved a promising baseline accuracy of 74.19% and a macro F1-score of 62.21% on the full dataset.  
  
 These results validate the feasibility of adapting pre-trained language models using our zone-based framework for interpreting burnout-related emotional states in online discourse. This approach serves as a strong foundation for developing more effective and scalable tools for mental health monitoring within academic communities.