Weekly Report (26 Sep – 2 Oct)

A Comparative Study of CNN, RNN, and Transfer Learning Models for Facial Emotion Recognition in Gaming

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Tasks assigned:

1. Final evaluation matrix check more in depth with respect to annotation and face mapping as accuracy and classification is not just suitable
2. Find method or algorithm for face mapping like face points polygon  
   apply on data set points randomly to check annotation and accuracy.
3. Start with at least 5-10 image custom dataset for annotation and basic preprocessing parallelly start EDA report writing
4. Send public dataset link:

Task status and comments:

1. Completed and will be discussed on 2nd oct meeting. for annotation model intersection over union. We can use algorithms like haar cascades or deep learning model to detect bounding boxes then we can train model which we are using and apply IUO techniques to understand correctly face detected or not.  
   for relation between annote and face image visual inspection or confusion matrix is the matrix. One more matrix cohens kappa method in which one set will be checked by me and will be check with original similar to above technique.
2. In progress : for face mapping I tried mediapipe, dlib(some version isuue stating not able to find) on both Kaggle and local system but unable to install them for some reason in both.  
   there are more techniques going currently working on same .
3. Completed : created dataset for 26 points tried creating annotation files. Preprocessing tried for public dataset they have been augmented and same size of 48x48 so they are better.
4. Completed: dataset links <https://www.kaggle.com/datasets/msambare/fer2013/data>  
   <https://www.kaggle.com/datasets/milan400/ckplus-dataset/code>

New task(2nd oct) for next week:

\*\* will be discussed and updated\*\*

1. Chreat tech arch of project
2. Understand 3d and mapping and 3d for face mapping . calculate aerror between two points. Accuracy for basic accuracy method and precision particular for thiws regression problem   
   maths
3. Set of facial keypoitn sfinlize 5 columns co ordinates in annotation folder
4. Add more basic add facial things   
   because we are doing
5. We can hardcode if we find points coordinate
6. Data augmentation fdo andwrite
7. Send preprocessing file with augmention