**Week3 Report**

**Progress report for week3:**

* In the weeks 2&3 i have combined the two bone fracture datasets with 8,231 images total and addressed a severe class imbalance where only 0.12% of images showed fractures.
* I have implemented data cleaning, preprocessing with augmentation, and created a simple baseline CNN model. The main challenge was the extreme imbalance between fractured and non-fractured images.
* And I have solved this using oversampling to increase fractured cases to 23% of the training data and weighted loss functions.
* The final model achieved good validation accuracy with high precision and 67% recall for detecting fractures, successfully learning to distinguish between classes rather than just predicting the majority class.

**For week 4** I will be working on implementing transfer learning models (ResNet, EfficientNet).