Group 02

Ayse Arslan, Louis Meeckers, Ali Al-Saeedi, Yonghui Cella

Labels - Weighted Cohens' Kappa

1. Compute the reliability between every two experts with Cohens' Kappa
2. Compute the experts weights based on the reliability coefficients (sum = 1)
3. Normalize the labels around 0

1	2	3	4
Very good	Good	Abnormal	Not sprouted
-3	-1	+1	+3

4. Generate the final label with weighted majority voting

$$L = \frac{\sum_{i=1}^{n}(\hat{l}_i \times w_i + 3)}{6}$$

Methods

High-Level Fusion		Mid-Level Fusion			Federated Learning
Randomly initialized CNN	Pre-trained CNN	Randomly initialized CNN	Local Binary Pattern + kNN	Multiple Methods（ORB, BRISK, and SIFT) + SVC	Horizontal FL + CNN

What are the most important results?

- ➔ Mid-Level Local Binary Pattern: 0.95
- ➔ Mid-Level randomly initialized CNN: 0.93
- ➔ High-Level randomly initialized CNN: 0.93

What are we most proud of?

- ➔ Solve the experts’ reliability problem
- ➔ We have a lot of different methods to compare
- ➔ We still have good results

Thank you for listening.