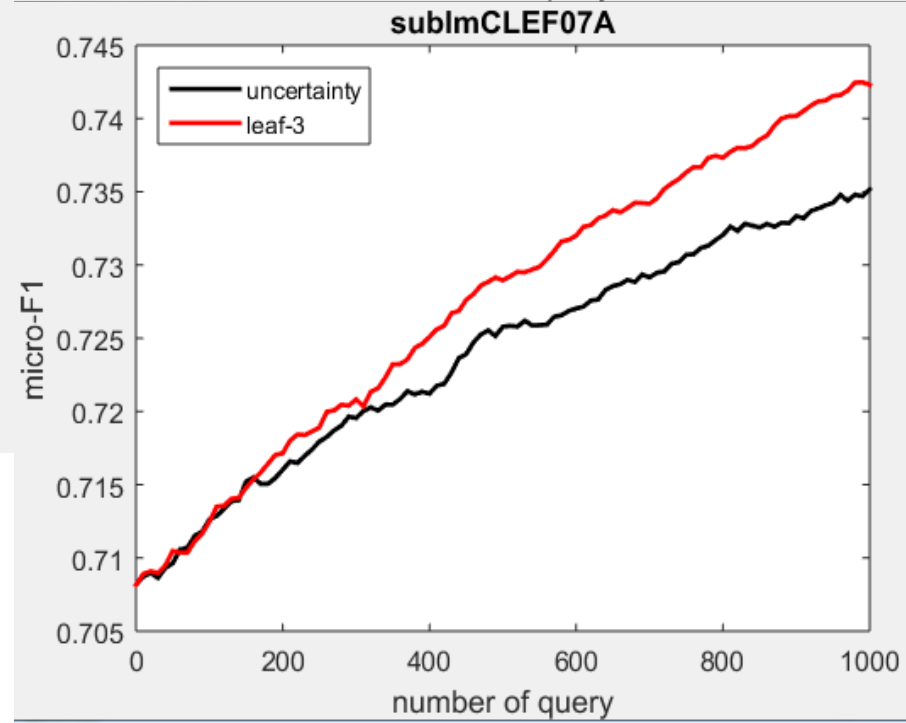
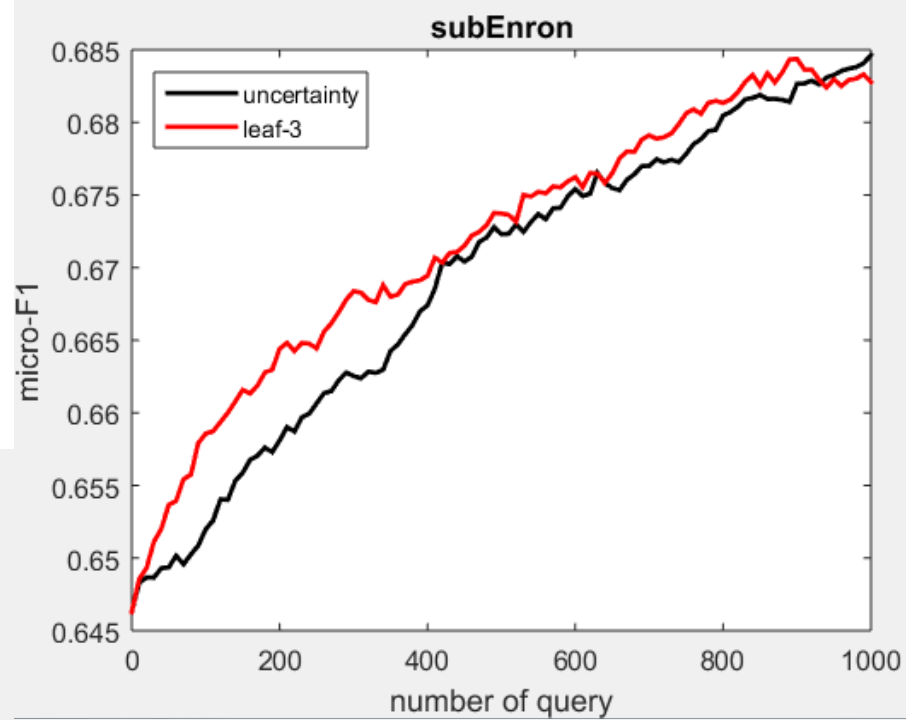
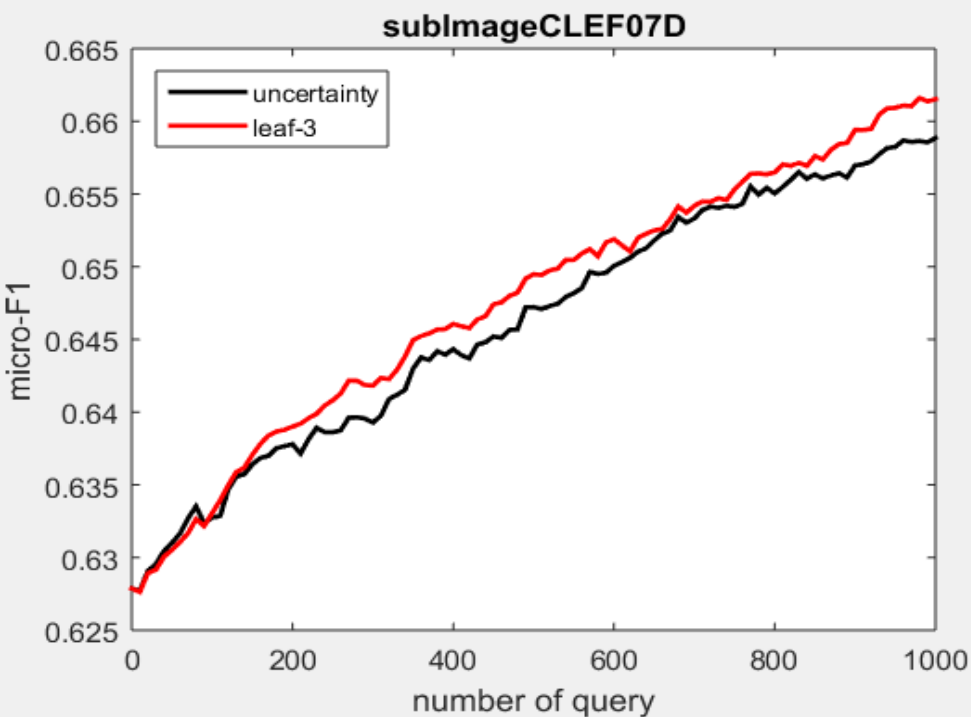


hierarchical active learning

$$\arg \max_{x,y} I(y == 1) * U_{anc}^{ij} + I(y == -1) * U_{des}^{ij} + U_{ij}$$

$$U_{anc}^{ij} = U_{ij} \quad U_{des}^{ij} = \sum_{k \in \text{leaf}(j)} U_{ik}$$



$$C_{i,j} = I(y=1) * U_{anc}^{ij} + I(y=-1) * U_{des}^{ij} + U_{ij}$$

$$\arg \max_{x,y} \frac{C_{i,j}}{\text{cost}(j)}$$

