Final Project : Proposal Topic K

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1 Topic Choice

For the final project, we have decided to work on **Topic K : Aligning Text to Sign Language Video**.

To introduce briefly the topic, we will work essentially with a specific signed language : British Sign Language (BSL) which has its own grammar. Currently, translation systems for signed languages are not efficient (except for very simple sentences). For instance, although sign language interpreted TV broadcasts are readily available, the subtitles are usually aligned with the audio rather than the sign language.
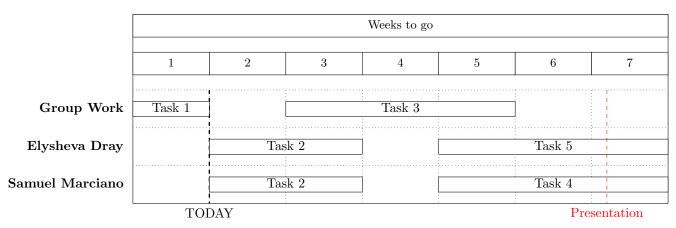
Our aim for this Final Project is to **align** subtitles to continuous sign language in interpreted video. It will help later on, for creating large scale signing text corpora for translation tasks. We know that there is no one-to-one relationship between words in a subtitle and signs in a signing segment but we want here to locate subtitles rather than individual signs.

For this, we will use BOBSL dataset (BBC-Oxford British Sign Language Dataset), a large scale dataset of BSL-interpreted BBC broadcast footage accompanied by written English subtitles. This data-set contains about 13 hours of strongly (manually aligned sentences) annotated training data, as well as over 1000 hours of weakly annotated training data (approximately aligned sentences to sign language video). BOBSL covered a large range of topics with 37 different signers.

2 Plan of work

Task 1 - Read the different topics and choose one

Task 2 - Read the papers and reproduce the baseline results on BOBSL from [1] using the available code here.

Task 3 - Try to improve upon these results. We will use additional information from automatic sign spottings. We will try to add information on the available sign spottings to the transformer-based architecture.

Task 4 - Evaluate results to see whether or not there is an improvement

Task 5 - Visualise error cases

Weeks to go							
	1	2	3	4	5	6	7
Group Work	Task 1		Task 3				
Elysheva Dray		Task 2			Task 5		
Samuel Marciano		Task 2			Task 4		

TODAY   Presentation

References

[1] Samuel Albanie, Gül Varol, Liliane Momeni, Hannah Bull, Triantafyllos Afouras, Himel Chowdhury, Neil Fox, Bencie Woll, Rob Cooper, Andrew McParland, and Andrew Zisserman. Bbc-oxford british sign language dataset, 2021.