

SLICES OF ATTENTION IN ASYNCHRONOUS VIDEO JOB INTERVIEWS



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CONTEXT & MOTIVATION

Asynchronous video interview

- Candidates record themselves while answering a set of questions
- Recruiters can watch and assess the video of candidates' answers and possibly invite the candidate to a face-to-face interview.

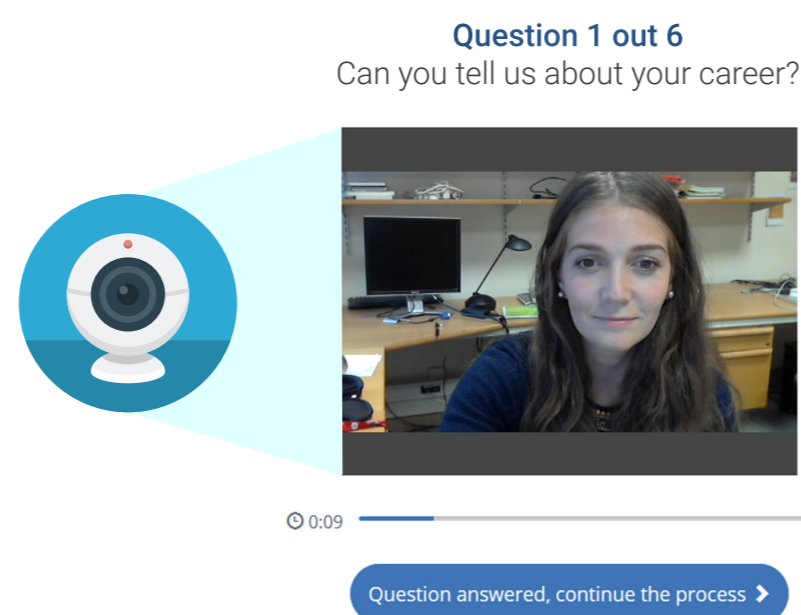
- Attention mechanism could leverage fine-grained temporal level information using only global label (invited or not).
- This study aims to **understand what happens** during peaks of attention
- Highlighting key moments will provide useful feedback for candidates and recruiters [1]

1| PREVIOUS WORK & FRAMEWORKS

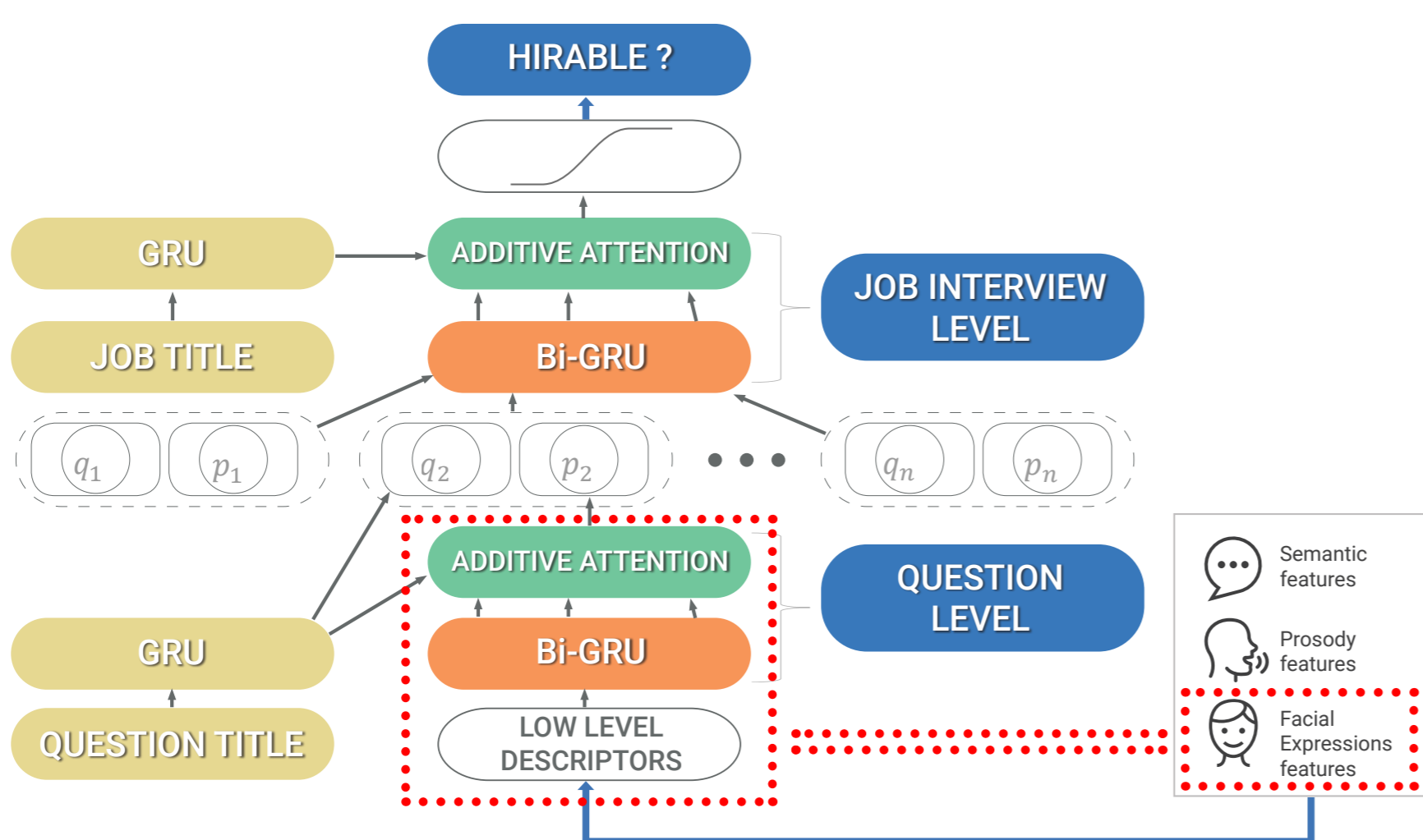
Dataset

Corpus collected by the EASYRECRUE company

- 475 real commercial job positions
- 7095 real candidates
- Assessments by real recruiters
- **Large database** (558 Hours of videos, 2845 videos)



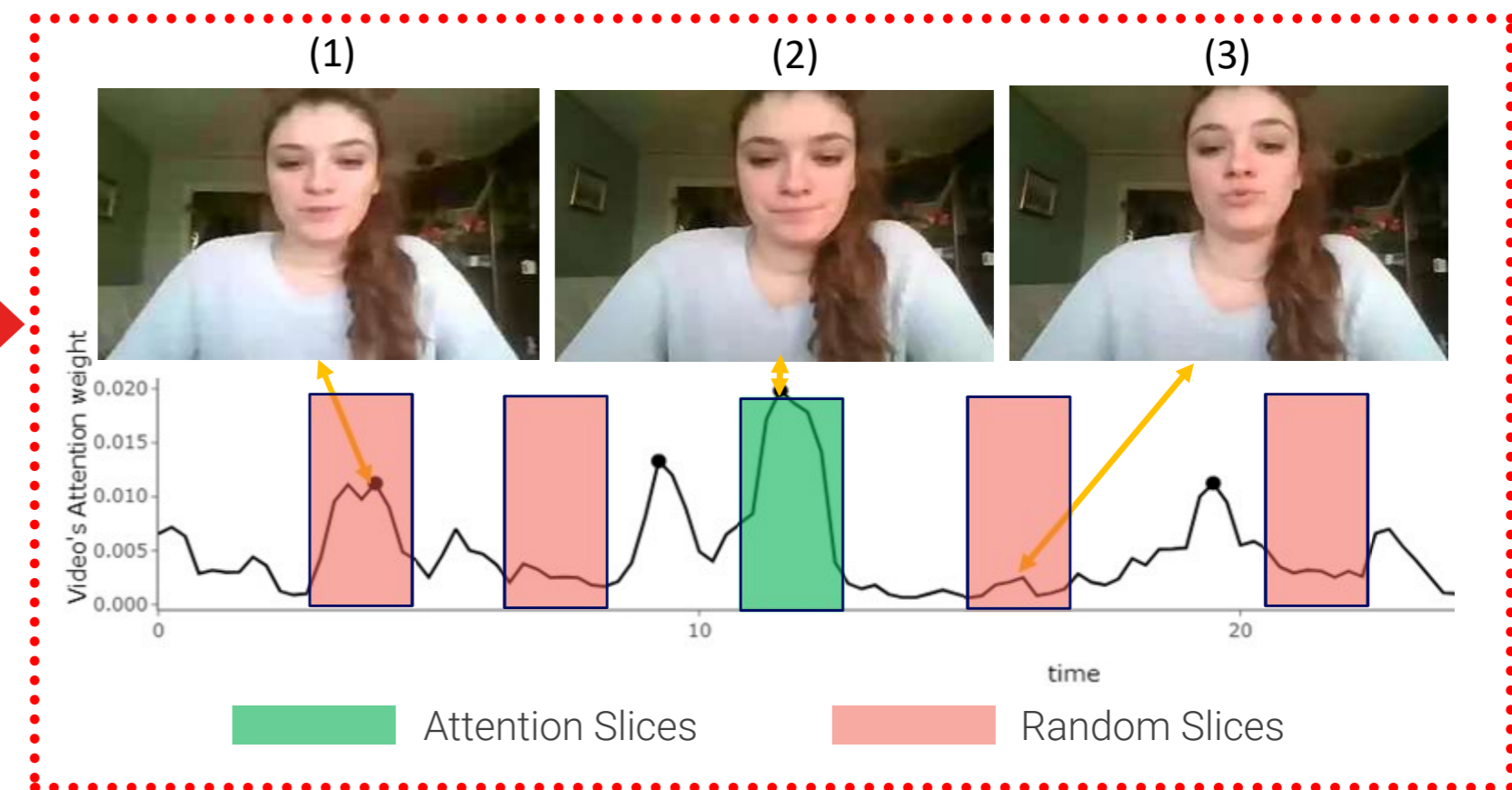
Predictive attention model : HireNet [2]



2| ARE FACIAL EXPRESSIONS DURING ATTENTION SLICES DIFFERENT FROM THOSE IN RANDOM SLICES ?

- Only **the first question** of the interview
- Peak **with the biggest amplitude**
- We conduct analysis only on the **facial expressions features**

A| Extraction of attention slices



- **Attention slices**
 - Duration between 0,5s and 4s
 - More often at the beginning and at the end of the answer

B| Supervised classification between attention slices and random slices

- Sample of **four random slices** and one **attention slice** for each answer.
- **Binary classifier** to predict if **the facial expressions were extracted from a random slice or an attention slice**

Model	F1 Positive Class	F2 Negative Class	Mean F1
Random Baseline	0,286	0,614	0,450
Majority Class	0	0,888	0,444
Lasso	0,812	0,955	0,884
Random Forest	0,760	0,945	0,852

- **Facial expressions during attention slices are different from those in random slices**

C| Features importance of the supervised classification

- **Attention slices included features of facial expressions of anxiety [3]**
 - **Eyes closed** longer than usual
 - Activation of **lip stretcher and lip tightener**
 - **Non-activation of jaw drop.**

3| ARE ATTENTION SLICES MORE INFORMATIVE WITH REGARD TO HIRABILITY THAN RANDOM SLICES ?

	AUC			
	RF	Lasso	SVM linear	SVM RBF
Random thin slices	0,545	0,517	0,518	0,528
Attention slices	0,554	0,550	0,543	0,537

- **significant differences** in the predictive performance of the attention slices in comparison to random slices

4| FUTURE DIRECTIONS

- Characterize key moments in term of positive or negative impact.
- Expand our work to other questions and modalities.
- Improve the learned model in terms of performance and bias control.

ACKNOWLEDGMENTS

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 [3] Feiler, A.R. et Powell, D.M. 2015. Behavioral Expression of Job Interview Anxiety. (2015)