

Motivation

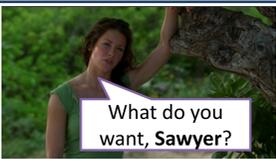
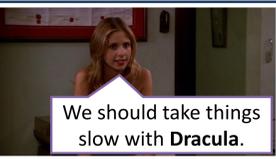
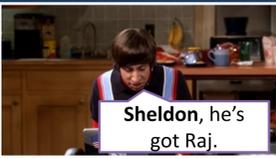
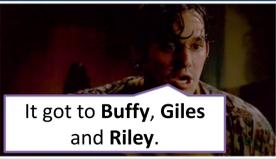
Most works that deal with **person identification in TV series** use either manually annotated data or extract character supervision from a combination of subtitles and transcripts. However, manual annotation is expensive and transcripts are often hard to find making it hard to scale the methods for all TV series. We investigate the topic of automatically labelling all character appearances in TV series using information obtained **solely from subtitles**.

Contributions

- PersonID formulated as a MIL problem with weak supervision from subtitles
- A novel approach for creating MIL-bags to label characters
- Thorough comparison of different MIL methods

Subtitle Processing

Name mentions are grouped into 1st, 2nd and 3rd person

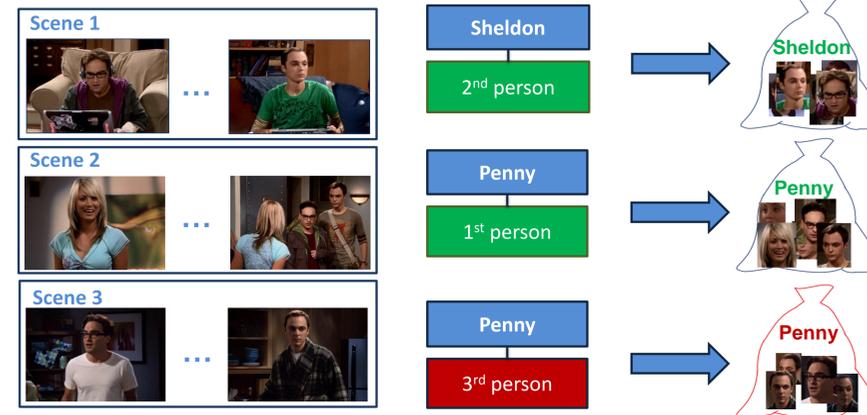
1st Person I am <name>. My name is <name>.		3rd Person – Verbs <name> 3 rd p. verb... ... 3 rd p. verb <name>	
2nd Person – Start <name>, ...		3rd Person – Prepo. ... preposition <name> ...	
2nd Person – End ..., <name>		Enumerations <name>, <name> ...	

Contact

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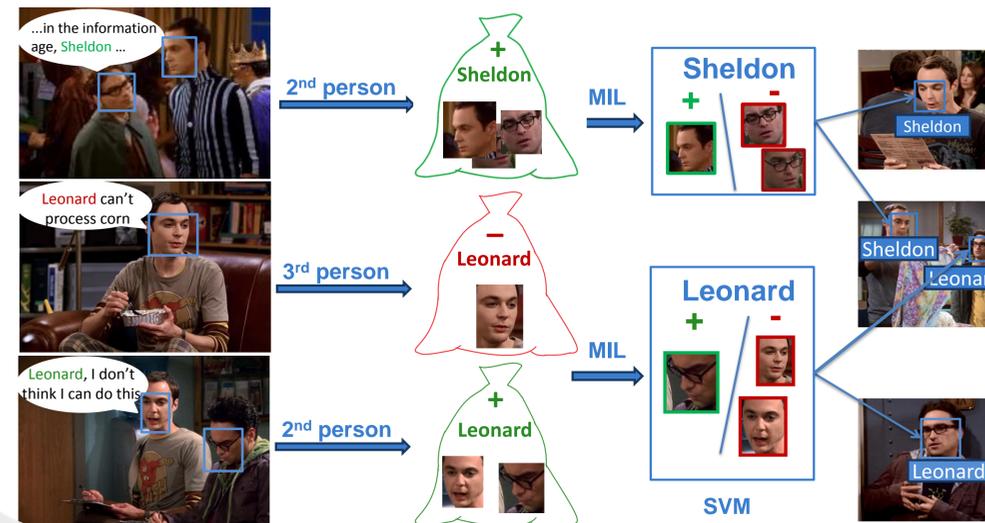
Creating Bags

Name references are used to create weakly labeled bags

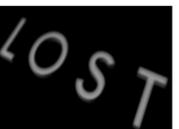


Approach Overview

- Multiple Instance Learning is used to label instances in the bags
- The labeled instances are used to train SVM models



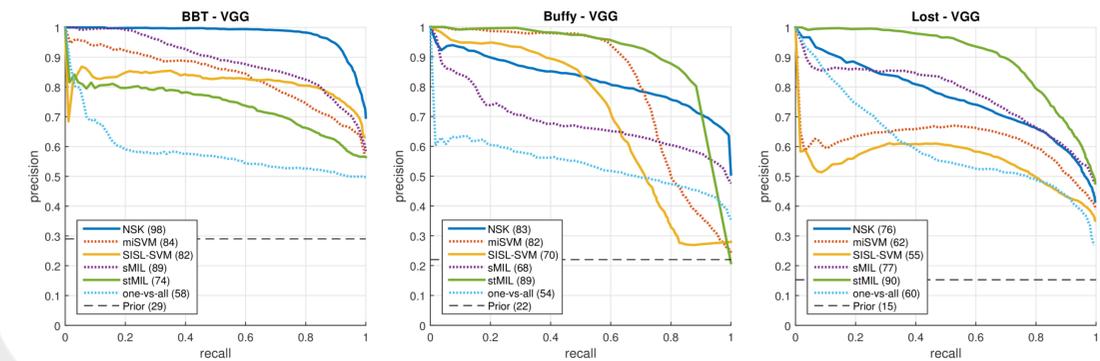
Data set

 F: 3920 C: 11	 F: 5861 C: 27	 F: 6027 C: 30
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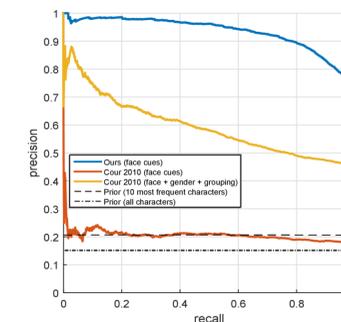
Bag Quality

	Series	# bags	% correct	# tracks	p *tracks
Positive	BBT+	125	96.0	7240	0.23
	Buffy+	237	89.5	10273	0.24
	Lost+	178	84.8	4093	0.32
Negative	BBT-	73	46.5	4461	0.11
	Buffy-	144	44.4	6395	0.12
	Lost-	86	70.9	2157	0.06

Comparison of different MIL methods



Comparison to state of the art



How far are we?

BBT		Buffy		Lost	
S	S+T	S	S+T	S	S+T
62.2	79.1	34.0	80.5	35.1	70.9

Acknowledgement

This work was funded by the German Research Foundation (DFG).