

Misogyny and Aggressiveness Tend to Come Together and Together We Address Them

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Problem

Detect whether an Italian tweet is misogynous and, if it is, whether it is also aggressive.

Motivation

- 1) Increase in the number of misogynous tweets from 2019 to 2021: from 26% to 44% of all hateful posts (Vox, 2022).
- 2) Correlation between misogyny on Twitter and domestic violence (Blake et al., 2021).

Approaches*

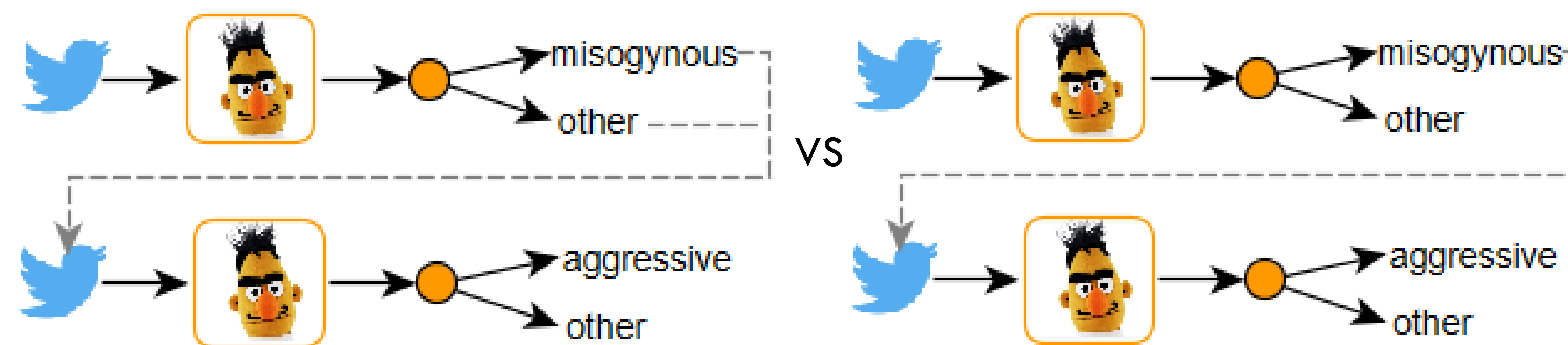
- 1) A combination of binary models;
 - 2) A multi-class model targeting both problems simultaneously.
- * We also tried with a multi-task learning model

Dataset

partition	misogynous (aggr.)	other	total
training	2,337 (1,783)	2,663	5,000
test	500 (176)	500	1,000

Hypotheses and Experiments

- ✓ **H1** - Training the aggressiveness model on the full training set boosts the performance → the more data the better.



- ✓ **H2** - A cascaded model to solve one problem next to the other is better than addressing both independently.

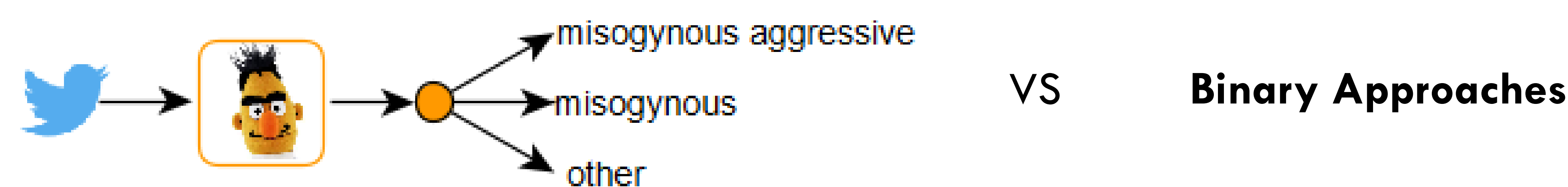
For this experiment we compare **three testing scenarios**:

Realistic: only instances predicted as misogynous can be judged for aggressiveness.

Optimistic: only instances labeled as misogynous according to the gold standard are assessed for aggressiveness.

Naïve: the aggressiveness model predicts on all instances, regardless of the misogyny information.

- ✗ **H3** - A multi-class model performs better than a cascaded model because it assesses both problems at once.



Results*

exp	scenario	misogyny		aggressiveness		overall test
		dev	test	dev	test	
singA	naïve	92.01	82.33	87.62	70.38	76.36
singA	optim.	92.01	82.33	87.62	75.66	79.00
singA	realistic	92.01	82.33	87.62	71.17	76.75
singB	naïve	92.01	82.33	75.25	44.78	63.56
singB	optim.	92.01	82.33	75.25	73.36	77.84
singB	realistic	92.01	82.33	75.25	64.94	73.64
multi	-	87.59	82.48	84.76	68.61	75.54
unibo	(Muti and Barrón-Cedeño, 2020)					74.38
jigsaw ₁	(Lees et al., 2020)					74.06
jigsaw ₂	(Lees et al., 2020)					73.80

*singA + multi = 76.83

Take-home messages

- 1) Training the two models in a binary setting works better when feeding the model with all data.
- 2) The better the input produced by the misogynous model, the more accurate the prediction of its aggressiveness.
- 3) For multi, the info on aggressiveness improves the decisions on the misogyny class, at the expenses of the prediction of aggressiveness.

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