

Contents

1	Introduction	1
1.1	Natural Language Processing	1
1.1.1	Automatic text classification	3
1.1.2	Sentiment analysis, irony detection and stance detection	6
1.2	Morphology and syntax	7
1.2.1	<i>Universal Dependencies</i>	8
1.2.2	The UD framework and social media data	9
1.3	Problem statement and research questions	12
1.4	Structure of the thesis	15
1.5	Contributions	16
2	Irony detection	20
2.1	Shared tasks and corpora for irony detection	22
2.1.1	Organization of <i>IronITA 2018</i>	27
2.1.2	The creation of an ironic corpus: TWITTIRÒ	33
2.2	From feature-based approaches to deep learning	50
2.3	Irony detection using dependency syntax	52
2.3.1	Participation in the <i>IroSVA 2019</i> shared task	53
2.3.2	Multilingual irony detection with neural models	57
2.4	Concluding remarks on irony detection	66
3	Stance detection	69
3.1	Shared tasks and corpora for stance detection	70
3.1.1	Organization of <i>SardiStance 2020</i>	74
3.2	Machine learning approaches for stance detection	82
3.2.1	Participation in the <i>StanceCat 2017</i> shared task	86
3.3	Stance detection using dependency syntax	90
3.3.1	Participation in the <i>RumorEval 2019</i> shared task	91
3.3.2	Multilingual stance detection with neural models	97
3.4	Concluding remarks on stance detection	102
4	The interaction of irony and stance	105
4.1	Annotating irony on the <i>SardiStance</i> dataset	106
4.2	Analyzing morphology and syntax in ironic tweets	108

4.3	A tentative error analysis comparing irony and stance	112
5	Conclusions and future work	114
5.1	Conclusions	116
5.2	Future work	119