

Angelo Basile & Kenny Lino

January 12, 2018



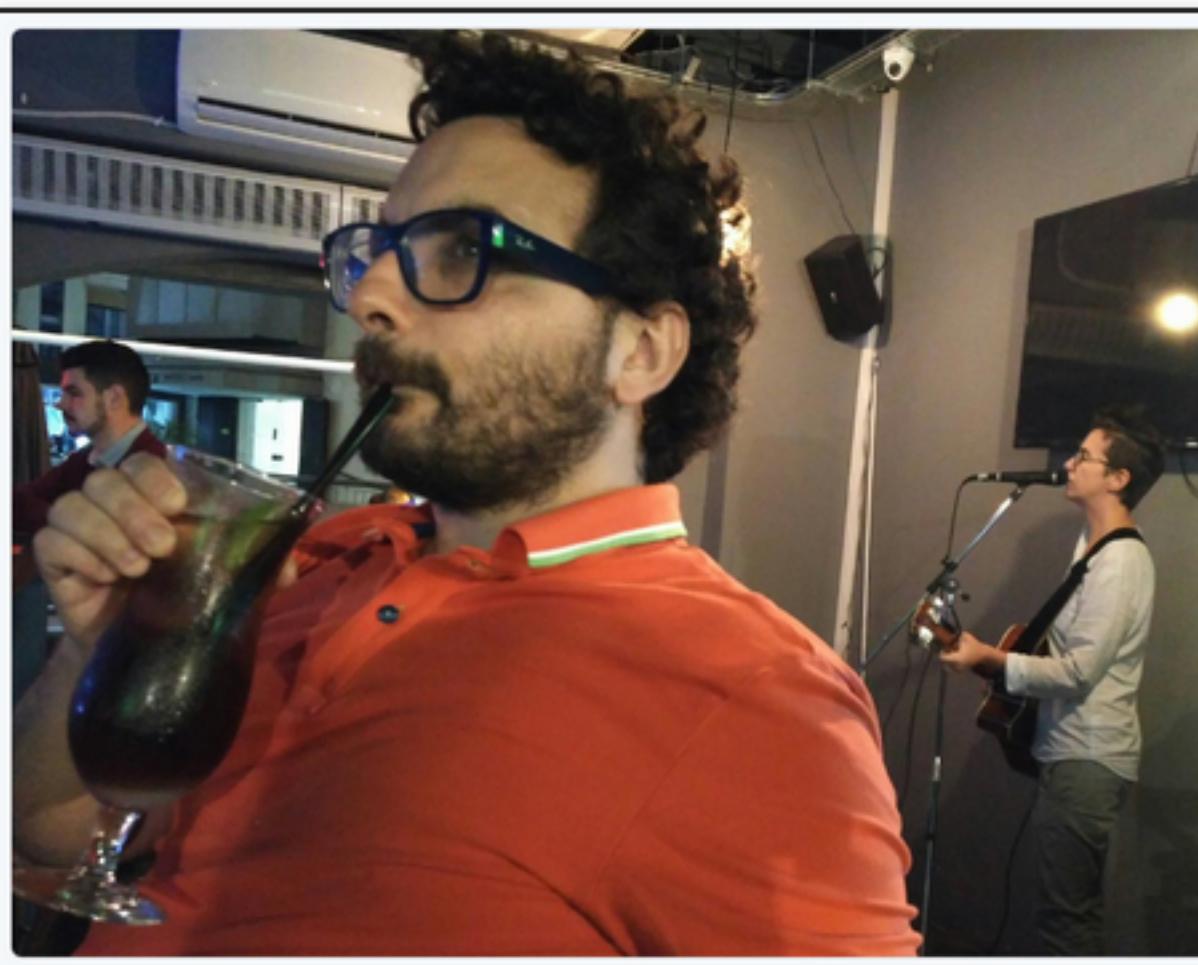
THE PROBLEM



THE PROBLEM



THE PROBLEM



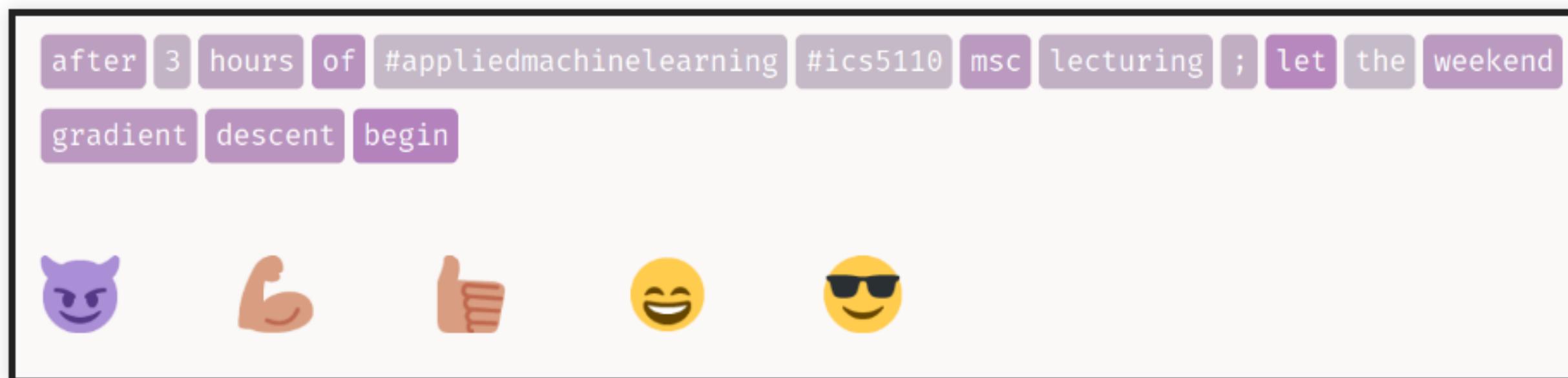


Jean-Paul Ebejer @malteseunderdog · 3 Nov 2017

After 3 hours of #AppliedMachineLearning #ICS5110 MSc lecturing; let the weekend gradient descent begin! #Ghamillulehor



HTTPS://DEEPMOJI.MIT.EDU/



ARXIV.ORG/ABS/1708.00524

Using millions of emoji occurrences to learn any-domain representations for detecting sentiment, emotion and sarcasm (Felbo et al.)



WHY



WHY

broad usage of emojis



WHY

broad usage of emojis

opinion mining



WHY

broad usage of emojis

opinion mining

necessity?



WHY

broad usage of emojis

opinion mining

necessity?

interlingua?

METHODOLOGY

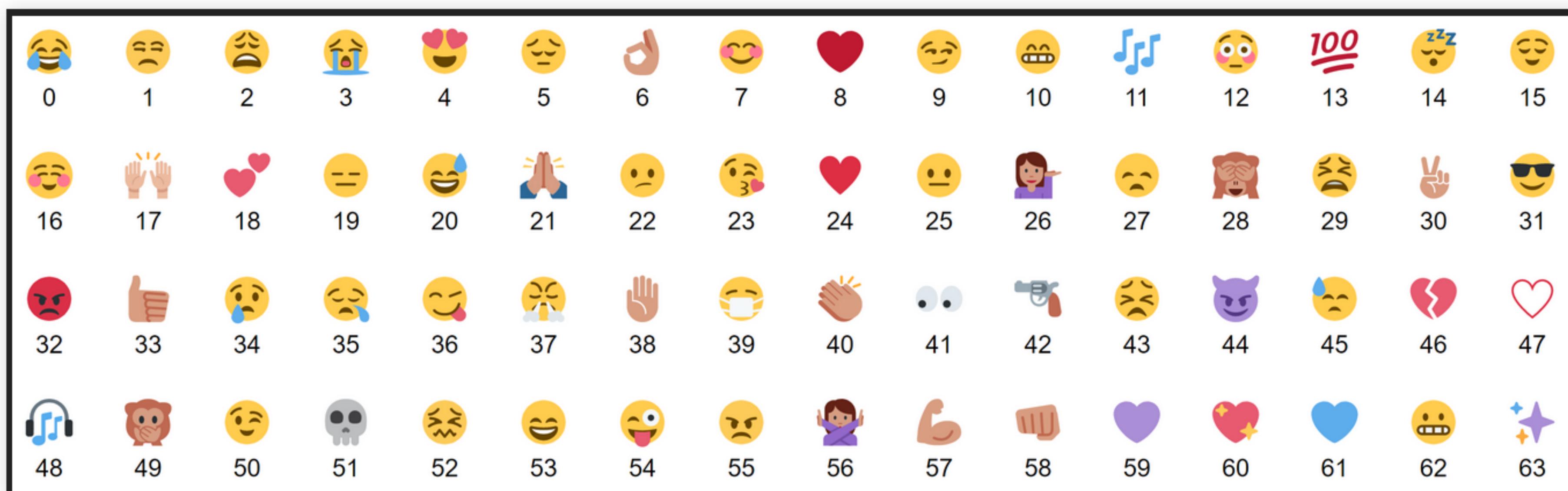
METHODOLOGY

- distant supervision
- neural model

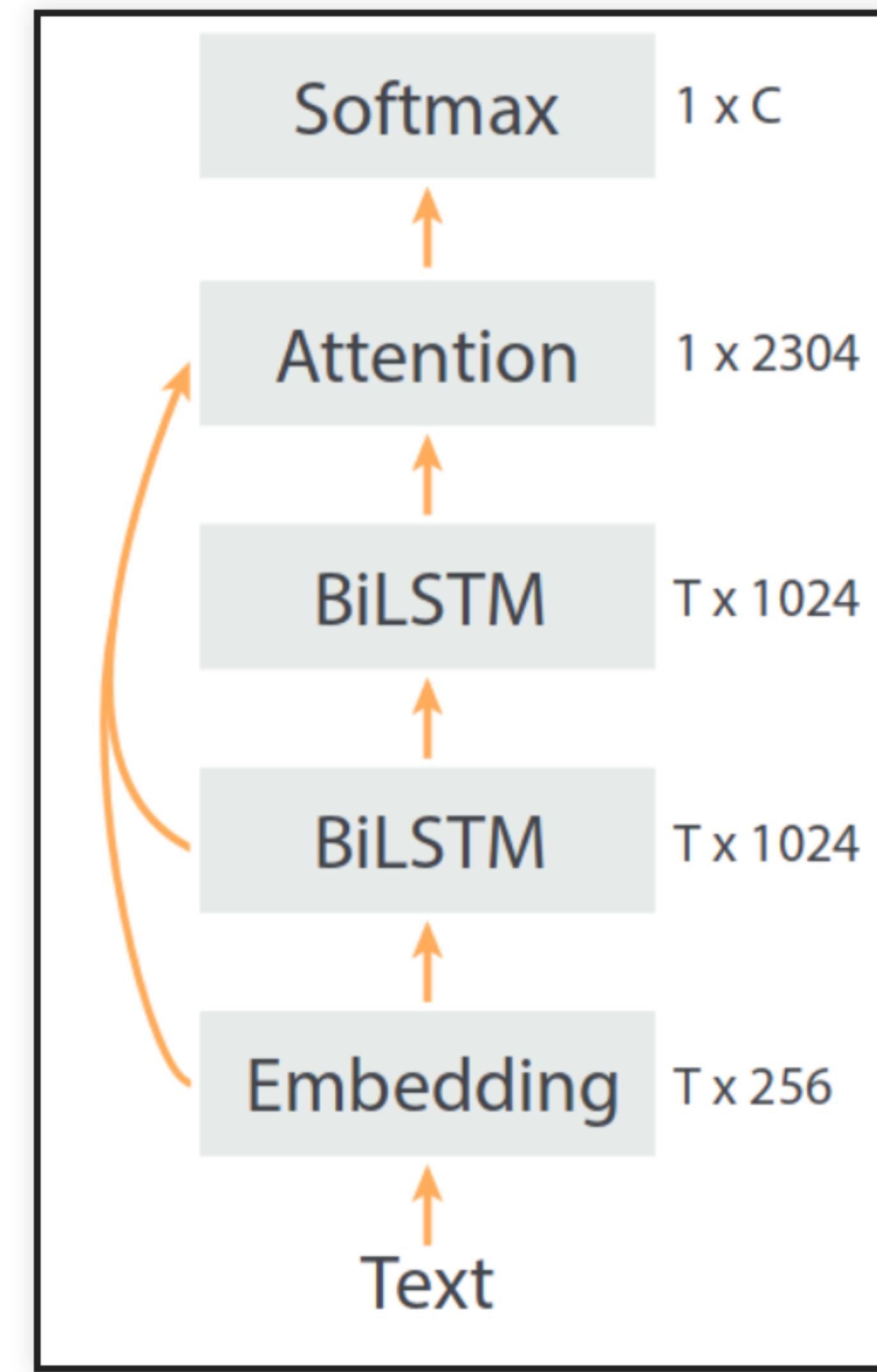


TRAINING

1.2 billion tweets and 64 commonly used emojis



DNN STRUCTURES



EXTRINSIC APPLICATIONS

MOTIVATION OF THIS WORK

Use the pre-trained network on various tasks



MOTIVATION OF THIS WORK

Use the pre-trained network on various tasks

Previous models limited by binary classification
and/or manual categorization



APPLICATIONS



APPLICATIONS

detection of...



APPLICATIONS

detection of...

sentiment



APPLICATIONS

detection of...

sentiment

emotion



APPLICATIONS

detection of...

sentiment

emotion

sarcasm



RESULTS

Dataset	Measure	State of the art	DeepMoji (new)	DeepMoji (full)	DeepMoji (last)	DeepMoji (chain-thaw)
SE0714	F1	.34 [Buechel]	.21	.31	.36	.37
Olympic	F1	.50 [Buechel]	.43	.50	.61	.61
PsychExp	F1	.45 [Buechel]	.32	.42	.56	.57
SS-Twitter	Acc	.82 [Deriu]	.62	.85	.87	.88
SS-Youtube	Acc	.86 [Deriu]	.75	.88	.92	.93
SE1604	Acc	.51 [Deriu] ³	.51	.54	.58	.58
SCv1	F1	.63 [Joshi]	.67	.65	.68	.69
SCv2-GEN	F1	.72 [Joshi]	.71	.71	.74	.75



CONCLUSIONS



CONCLUSIONS

CONCLUSIONS



CONCLUSIONS

no conclusions



DEMO

