

SST examples

SST, Vanilla-LSTM, trained on default (tanh) attention (test acc=**.805**, conicity=**.697**)

Sentence	:	<SOS>	a	slick	skillful	little	horror	film	<EOS>
Attentions	:	0.00	0.04	0.08	0.20	0.30	0.24	0.13	0.00
SM(h_i)	:	0.00	0.09	0.17	0.24	0.17	0.17	0.17	0.00

Label: 1, Prediction: [0.5812621]

SST, Ortho-LSTM, trained on default (tanh) attention (test acc=**.776**, conicity=**.283**)

Sentence	:	<SOS>	a	slick	skillful	little	horror	film	<EOS>
Attentions	:	0.00	0.00	0.03	0.64	0.18	0.04	0.11	0.00
SM(h_i)	:	0.00	0.15	0.14	0.21	0.10	0.16	0.25	0.00

Label: 1, Prediction: [0.7968075]

SST, Diversity-LSTM, trained on default (tanh) attention (test acc=**.800**, conicity=**.188**)

Sentence	:	<SOS>	a	slick	skillful	little	horror	film	<EOS>
Attentions	:	0.00	0.00	0.12	0.86	0.01	0.01	0.01	0.00
SM(h_i)	:	0.00	0.02	0.04	0.19	0.25	0.16	0.34	0.00

Label: 1, Prediction: [0.9623399]

Yelp examples

Yelp, Vanilla-LSTM, trained on default (tanh) attention (test acc=**.949**, conicity=**.536**)

Sentence	:	<SOS>	Been	going	here	for	years.	A	great	place!	<EOS>
Attentions	:	0.00	0.35	0.09	0.06	0.01	0.01	0.04	0.18	0.25	0.00
SM(h_i)	:	0.00	0.08	0.07	0.10	0.08	0.09	0.06	0.18	0.35	0.00

Label: 1, Prediction: [0.984035]

Yelp, Ortho-LSTM, trained on default (tanh) attention (test acc=**.945**, conicity=**.186**)

Sentence	:	<SOS>	Been	going	here	for	years.	A	great	place!	<EOS>
Attentions	:	0.00	0.53	0.00	0.00	0.00	0.08	0.00	0.22	0.17	0.00
SM(h_i)	:	0.00	0.18	0.08	0.05	0.07	0.04	0.03	0.34	0.21	0.00

Label: 1, Prediction: [0.99045765]

Yelp, Diversity-LSTM, trained on default (tanh) attention (test acc=**.938**, conicity=**.347**)

Sentence	:	<SOS>	Been	going	here	for	years.	A	great	place!	<EOS>
Attentions	:	0.00	0.41	0.16	0.00	0.00	0.02	0.09	0.22	0.10	0.00
SM(h_i)	:	0.00	0.18	0.05	0.02	0.04	0.03	0.06	0.40	0.21	0.00

Label: 1, Prediction: [0.9969946]

bAbI-1 examples

Babi_1, Vanilla-LSTM, trained on equal attention (test acc=0.477, conicity=0.450)

```
P path      : <SOS>      Sandra      went      to      the      bedroom .      Sandra      travelled      to
Attentions : 0.00      0.09      0.09      0.09      0.09      0.09      0.09      0.09      0.09      0.00
SM(|[h_i]) : 0.00      0.02      0.01      0.02      0.07      0.17      0.09      0.06      0.04      0.00
Q path      : <SOS>      Where      is      Sandra <EOS>
Answer: office Predicted: office
```

bAbI-2 examples

Babi_2, Vanilla-LSTM, trained on equal attention (test acc=0.315, conicity=0.334)

```
P path      : <SOS>      Sandra      travelled      to      the      office .      Daniel      moved      to
Attentions : 0.00      0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.00
Mary travelled      to      the      bathroom .      Sandra      took      the      football there .
0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03
Daniel picked up      the      apple there .      Sandra      went      back      to      the      kitchen
0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03
Q path      : <SOS>      Where      is      the      football <EOS>
Answer: kitchen Predicted: kitchen
```

CNN examples

CNN, Vanilla-LSTM, trained with default (tanh) attention (test acc=**.595**, conicity=**.395**)

```
P path      : <SOS>      (      @entity2      )      one      @entity1      citizen      was      killed      and
Attentions : 0.00      0.00      0.00      0.00      0.04      0.06      0.08      0.01      0.00      0.00
police are calling      a      suspected      terror      attack      wednesday      night      near
0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
spokesman @entity7      said      a      37      -      year      -      old      @entity10      motorist
0.02      0.00      0.00      0.00      0.00      0.00      0.00      0.43      0.00      0.00
people standing at      a      bus      stop      in      the      @entity15      section      of      th
0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
identified by police as      @entity18      ,      26      ,      died      at      the      hospita
0.00      0.00      0.00      0.00      0.20      0.00      0.00      0.00      0.00      0.00
old woman remains in      serious      condition      ,      according      to      @entity7
0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
arrested and is under investigation by the @entity24 . " from
0.00      0.00      0.00      0.00      0.00      0.00      0.02      0.00      0.00      0.00
findings ,      there      is      a      strong      suspicion      that      we      're      talking a
0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
" @entity7      said .      amid      the      ongoing      investigation ,      a      magistrate
0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
can order an details of the incident (EOS)
```

