Transparent Semantic Parsing with Universal Dependencies using Graph Transformations

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Affiliation

Topic

Neural Symbolic Parsing

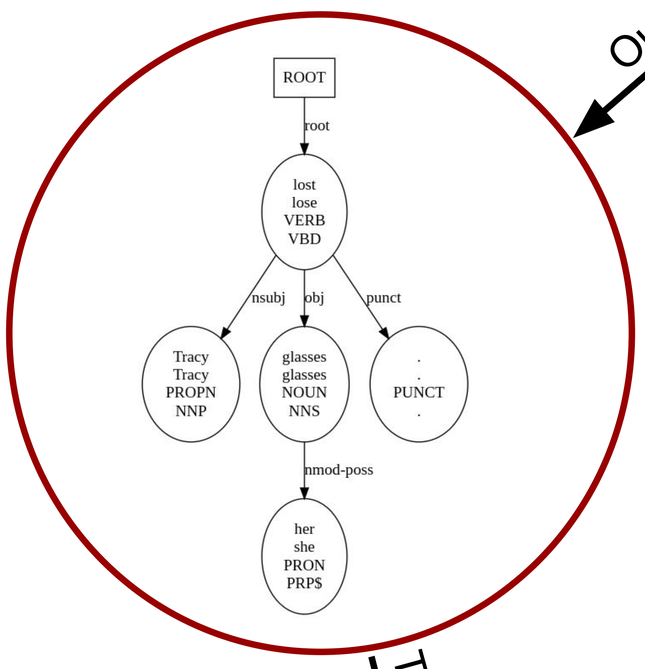
Idea

Dust off your Universal Dependency parser!

Innovation

Change UD output by graph transformations into a formal meaning representation

Output



Example

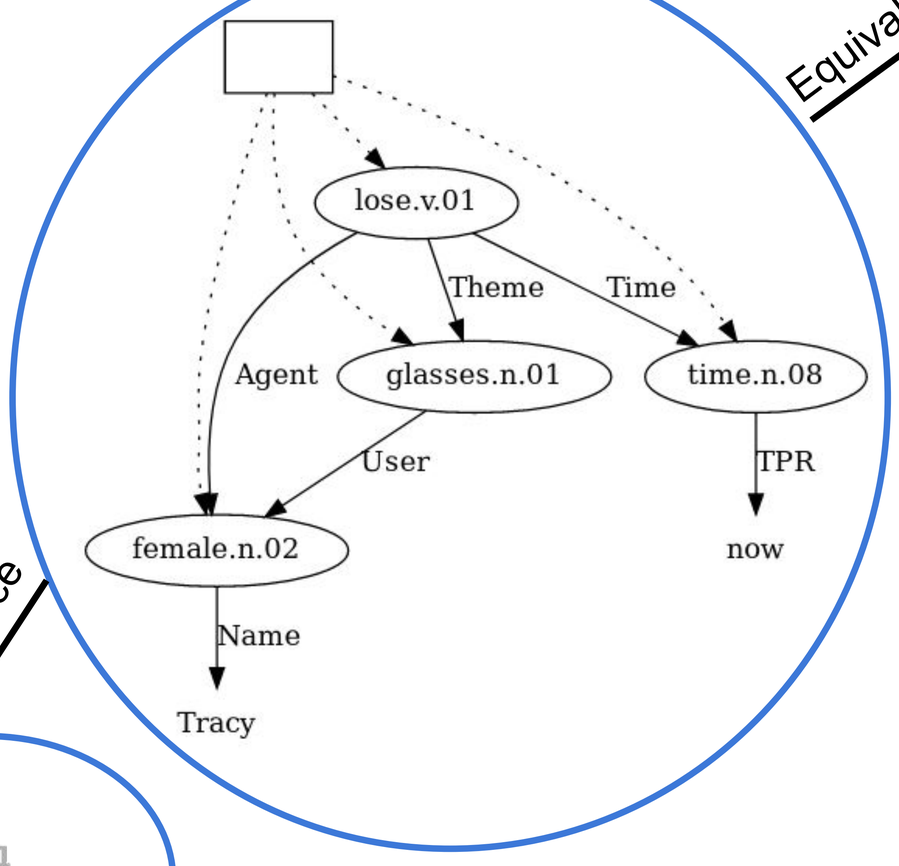
Result

Transform

Equivalent

x e y t
female.n.02(x)
Name(x,"Tracy")
lose.v.02(e)
Agent(e,x)
Theme(e,y)
Time(e,y)
glasses.n.01(y)
User(y,x)
time.n.08(t)
t ≺ now

Outperforms purely neural parser for Dutch, German, and Italian



Source

Parallel MEANING BANK

Conclusion

UD parser very useful when limited training data is available!

Conclusion

Semantic parsing without hallucinations