Evaluation Benchmarks and Learning Criteria for Discourse-Aware Sentence Representations

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RST-DT
Attribution
Background
Cause
Comparison
Condition
Contrast
Elaboration
Enablement
Evaluation
Explanation
Joint
Manner-Means
Same-unit
Summary
Temporal
Textual-organization
Topic-Change
Topic-Comment

Table 1: 18 coarse-grained relations in RST-DT

PDTB-E	PDTB-I
Comparison.Concession	Comparison.Concession
Comparison.Contrast	Comparison.Contrast
Contingency.Cause	Contingency.Cause
Contingency.Condition	Contingency.Prag cause
Contingency.Prag condition	Expansion.Alternative
Expansion.Alternative	Expansion.Conjunction
Expansion.Conjunction	Expansion.Instantiation
Expansion.Instantiation	Expansion.List
Expansion.List	Expansion.Restatement
Expansion.Restatement	Temporal.Asynchronous
Temporal.Asynchronous	Temporal.Synchrony
Temporal.Synchrony	

Table 2: The PDTB relation categories

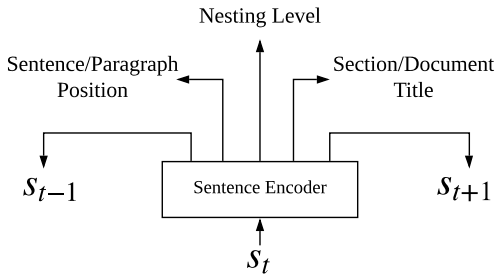

Figure 1: Schematic showing multitask training for our sentence embedding model.

A Hyperparameters

Our models use 1200 dimensional BiGRUs, resulting in 2400 dimensional sentence representations. The feedforward neural networks used in the decoders are parameterized using two hidden layers and use ReLU activation functions. We intialize our models with 300 dimensional GloVe embeddings (Pennington et al., 2014). We use Adam (Kingma and Ba, 2014) as optimizer and train our models for one epoch on Wikipedia without employing early stopping.

References

Diederik P Kingma and Jimmy Ba. 2014. Adam: A method for stochastic optimization. *arXiv preprint arXiv:1412.6980*.

Jeffrey Pennington, Richard Socher, and Christopher Manning. 2014. Glove: Global vectors for word representation. In *Proceedings of the 2014 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, pages 1532–1543. Association for Computational Linguistics.

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