# Cornell SPF: Cornell Semantic Parsing Framework

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The Cornell Semantic Parsing Framework (SPF) is a learning and inference framework for mapping natural language to formal representation of its meaning. The framework implements Combinatory Categorial Grammar (CCG; Steedman, 2000, 2011; Steedman and Baldridge, 2003) to map sentences to lambda calculus logical forms (Church, 1932, 1940; Montague, 1970a,b, 1973). The framework includes algorithms for learning and inference. SPF is implemented in Java and the code is available online.[1] The code repository includes a README and basic documentation. For a detailed introduction to formalism and implemented in SPF, see our tutorial.[2] If you use SPF, please cite:

```
@misc{Artzi:16spf,
    Author = {Yoav Artzi},
    Title = {Cornell {SPF}:  Cornell
Semantic Parsing Framework},
    Year = {2016},
    Eprint = {arXiv:1311.3011},
}
```

This document has been updated for version 2.0, and will be updated as new versions are released.

## 1 Projects Using SPF

This is a partial list of projects that have used SPF:[3]

- Bootstrapping Semantic Parsers from Conversations (Artzi and Zettlemoyer, 2011)

- Learning to Parse Natural Language Commands to a Robot Control System (Matuszek et al., 2012b)

- A Joint Model of Language and Perception for Grounded Attribute Learning (Matuszek et al., 2012a)

- Weakly Supervised Learning of Semantic Parsers for Mapping Instructions to Actions (Artzi and Zettlemoyer, 2013)

- Scalable Semantic Parsing with Partial Ontologies (Kwiatkowski et al., 2013)

- Learning Distributions over Logical Forms for Referring Expression Generation (FitzGerald et al., 2013)

- Learning Compact Lexicons for CCG Semantic Parsing (Artzi et al., 2014)

- Context-dependent Semantic Parsing for Time Expressions (Lee et al., 2014)

- Scalable Semantic Parsing with Partial Ontologies (Choi et al., 2015)

- Learning to Interpret Natural Language Commands through Human-Robot Dialog (Thomason et al., 2015)

- Broad-coverage CCG Semantic Parsing with AMR (Artzi et al., 2015)

- Neural Shift-Reduce CCG Semantic Parsing (Misra and Artzi, 2016)

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[1] `http://yoavartzi.com/spf`

[2] `http://yoavartzi.com/tutorial`

[3] If you are using SPF for your work, please let us know, so we can update this list.

## 2  License

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## 3  Acknowledgments

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