



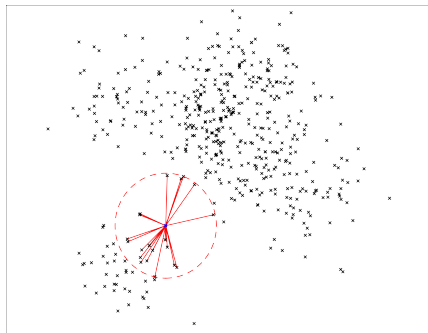
Question Answering System: Step by Step

Natural Language Processing: Jordan
Boyd-Graber
University of Maryland
HOMEWORKS

Getting Started

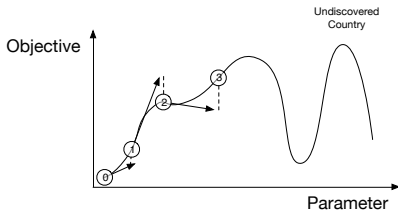
- Sequence of small project to teach basics of question answering
- Introducing competition data, framework, useful tools

Nearest-neighbor



- Actually produce a (simple) classifier
- Strong baseline to compare against
- Can submit to Codalab

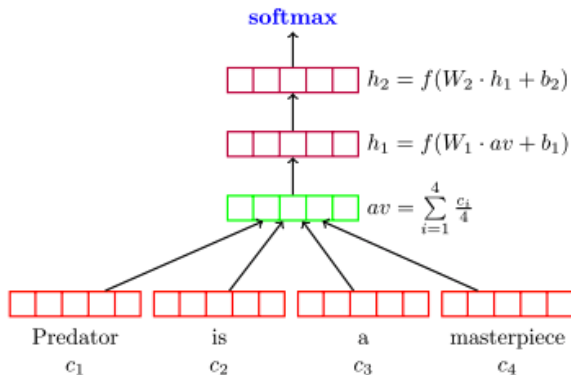
Logistic Regression



- Using pytorch framework
- Optimizing an objective function
- Adding new labels to dataset

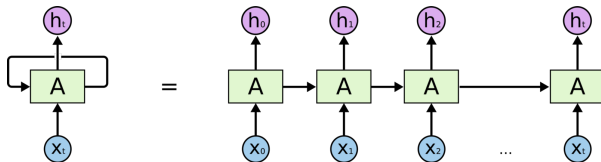
Deep Averaging Network

DAN



- Deep learning
- Question answering (same as nearest-neighbor)
- Real piece of (simple) research

Sequence Model: Networks



- More complicated architecture
- Learning **when** to answer questions
- Modifying objective functions

Reading Comprehension

AllenNLP

- Modern NLP framework / model
- Combines IR, sequence models, deep learning
- Not confined to small answer set
- Alternative to previous approaches

Project



- Build on Homeworks: Answer questions!
- Focus on what you want:
 - Novels
 - Time periods
 - Multilingual data
- Live competitions

Advice

- Can start on competition immediately
- Work through subprojects: understand what's important
- Designed to introduce elements systematically