Introduction to AllenNLP

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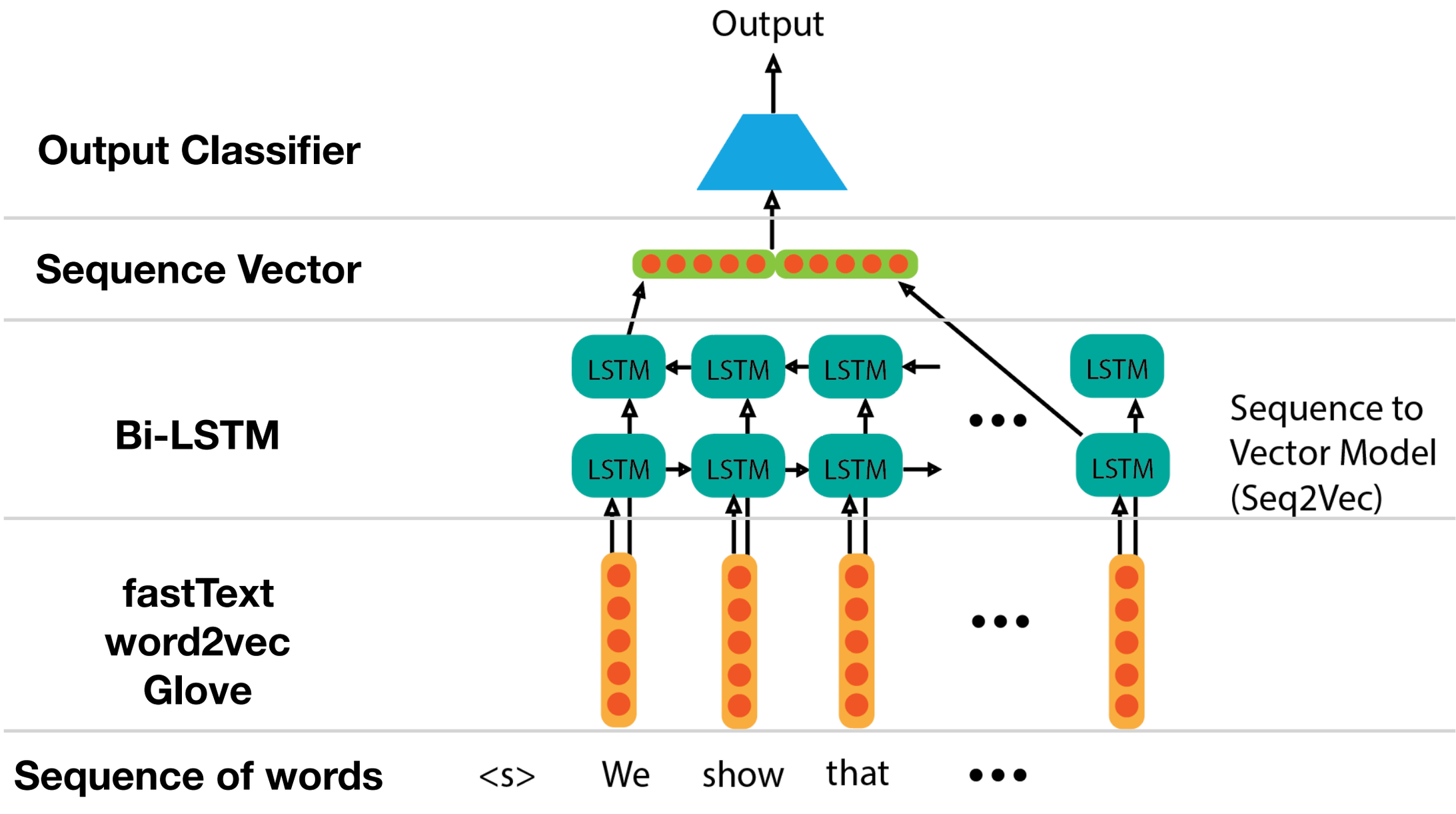
Recap: Prediction using Deep Learning



Recap: Prediction using Deep Learning

Output Classifier	Feed forward network
Sequence Vector	Concatenation
bi-LSTM	Write LSTM (backward/forward)
fastText **word2vec** **Glove**	Embedding Layer
Sequence of text	Build dictionary, dataset generator, padding, batching, …

Recap: Prediction using Deep Learning

Output Classifier	Feed forward network
Sequence Vector	Concatenation
bi-LSTM	Write LSTM (backward/forward)
fastText **word2vec** **Glove**	Embedding Layer
Sequence of text	WORK LOAD HERE!

AllenNLP!

Introduction to AllenNLP

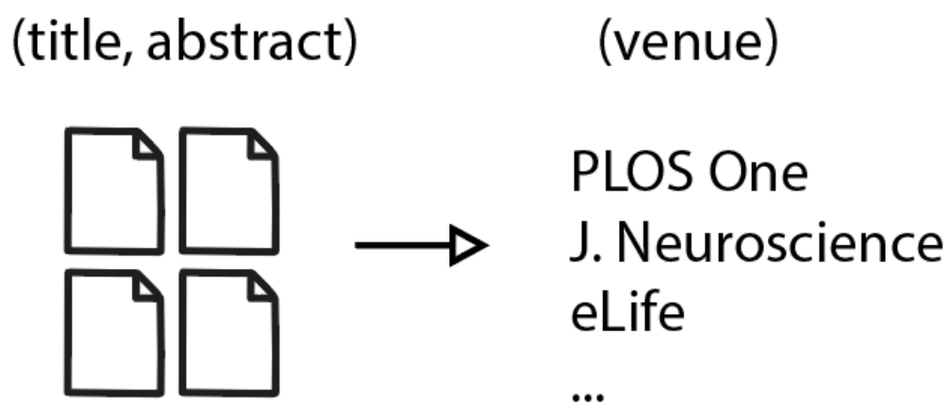
- An open-source NLP research library, built on PyTorch (Python >= 3.6)
- Easy to design and evaluate new deep learning models
- Remove a lot of hassle for Deep Learning NLP pipeline
- Check out demo: http://demo.allennlp.org/machine-comprehension
- Installation: `pip install allennlp`

Organizations using AllenNLP

ALLEN INSTITUTE for ARTIFICIAL INTELLIGENCE
facebook research
airbnb
amazon alexa
UNIVERSITY of WASHINGTON
USC University of Southern California
Stony Brook University
Carnegie Mellon University
UCI University of California, Irvine
UNIVERSITY OF CAMBRIDGE
THE UNIVERSITY of EDINBURGH
Penn University of Pennsylvania
NYU
The University Of Sheffield.
HARVARD UNIVERSITY

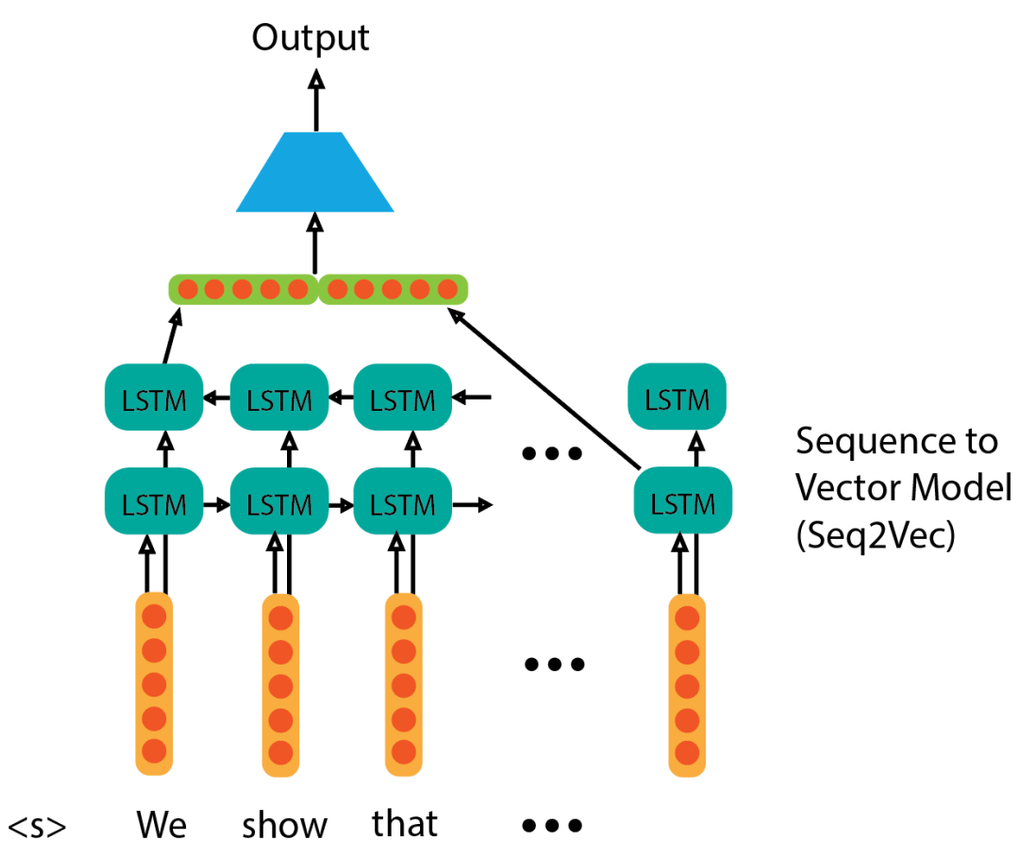
AllenNLP Demo

- Generally, we have to write 2 classes: *DatasetReader, Model* (subclass of ``torch.nn.Module``)
- **Demo**:
  - **Question**: Which venue should we submit to?
  - **Dataset**: (title, abstract, venue) from 30 journals
  - **Output**: probability of venues

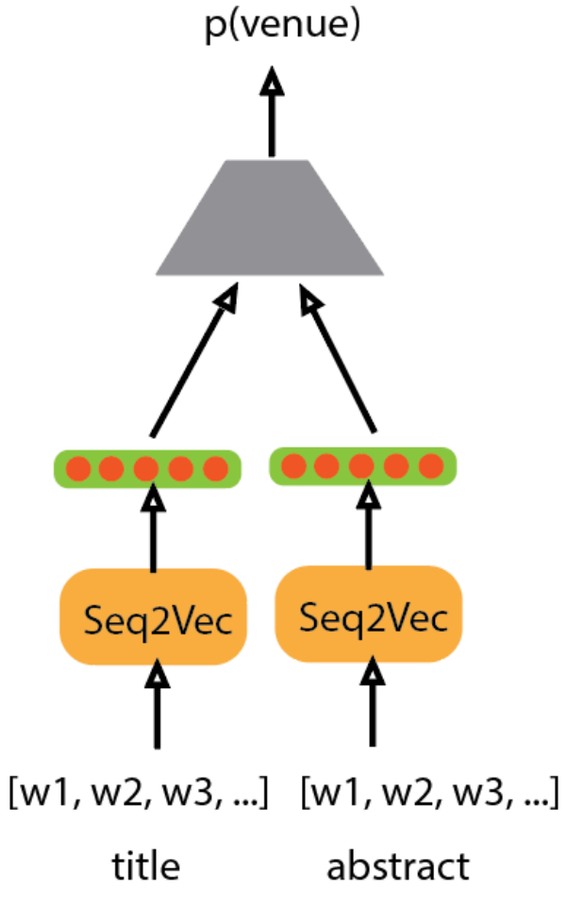


AllenNLP Demo

- Rough idea of the implementation today: Venue prediction



Sequence to vector model (Seq2Vec)



Combine (title, abstract) vector and predict

Demo

https://github.com/titipata/allennlp-tutorial