



Frameworks

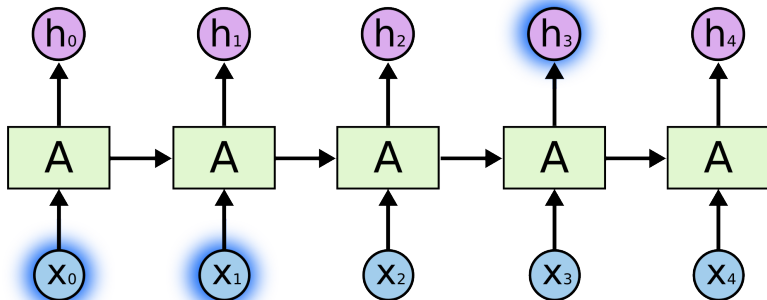
Advanced Machine Learning for NLP

Jordan Boyd-Graber

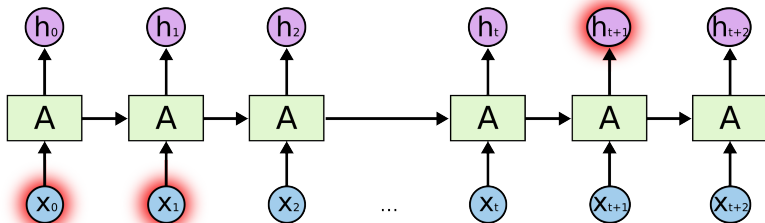
INTRODUCTION

Slides adapted from Christopher Olah

What's wrong with RNNs?



What's wrong with RNNs?



Learning a regular expression

- Suppose we wanted to learn $a^n b^n$
- Need to encode arbitrarily long dependency in state of RNN
- More importantly, don't know *when* that information is useful

Role of LSTMs

- Now standard baseline method for sequence labeling and classification tasks
- Like RNNs, hidden layer is critically important
- Can be applied to downstream tasks