

## Chatbot

- Video:** Tasks with Long Sequences  
2 min
- Reading:** Tasks with Long Sequences  
10 min
- Reading:** Optional AI Storytelling  
15 min
- Video:** Transformer Complexity  
3 min
- Reading:** Transformer Complexity  
10 min
- Video:** LSH Attention  
4 min
- Reading:** LSH Attention  
10 min
- Reading:** Optional KNN & LSH Review  
20 min
- Lab:** Ungraded Lab: Reformer LSH  
1h
- Video:** Motivation for Reversible Layers: Memory!  
2 min
- Reading:** Motivation for Reversible Layers: Memory!  
10 min
- Video:** Reversible Residual Layers  
5 min
- Reading:** Reversible Residual Layers  
10 min
- Lab:** Ungraded Lab: Revnet  
1h
- Video:** Reformer  
2 min
- Reading:** Reformer  
10 min
- Reading:** Optional Transformers beyond NLP  
20 min
- Reading:** Acknowledgments  
10 min

## Heroes of NLP: Quoc Le

## Assignment

## Course Resources



# Tasks with Long Sequences

Tasks that make use of long sequences include

- Writing books
- Storytelling
- Building intelligent agents for conversations like chatbots.

This week you will learn about the bottlenecks in these larger transformer models, and solutions you can use to make them trainable for you. You will also learn about the re-former model (AKA the reversible transformer). Here is what you will be building for your programming assignment: A chatbot!

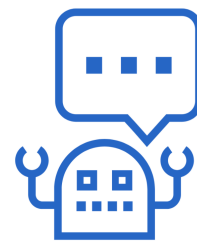
## Context Windows:

**User 1:** What's for dinner?

**Chatbot:** Who's cooking, you or me?

**User 1:** Hey now chatbot.

**Chatbot:** I hope it's not hay, that's what horses eat.

[Mark as completed](#)