# Week 4

Sequences, Time Series and Prediction

### Week 4

Discuss this week's modules here.

299 threads · Last post 8 days ago

**Go to forum**

## Real-world time series data

👤 Laurence Moroney

On top of DNNs and RNNs, let's also add convolutions, and then put it all together using a real-world data series -- one which measures sunspot activity over hundreds of years, and see if we can predict using it.

## Real-world time series data

✅ **Video:** Week 4 - A conversation with Andrew Ng   1 min

✅ **Video:** Convolutions   58 sec

✅ **Reading:** Convolutional neural networks course   10 min

✅ **Video:** Bi-directional LSTMs   3 min

✅ **Reading:** More on batch sizing   10 min

✅ **Video:** LSTM   1 min

✅ **Reading:** LSTM notebook   10 min

▶ **Video:** Real data - sunspots   3 min        **Resume**

▶ **Video:** Train and tune the model   3 min

▶ **Video:** Prediction   1 min

▶ **Video:** Sunspots   1 min

📖 **Reading:** Sunspots notebook   10 min

▶ **Video:** Combining our tools for analysis   3 min

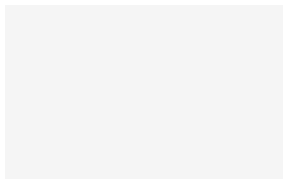📋 **Quiz:** Week 4 Quiz   8 questions    Due Dec 7, 1:59 AM CST

## Weekly Exercise - Sunspots

⎋ **Ungraded External Tool:** Exercise 4 - Sunspots   1h

⎋ **Ungraded External Tool:** Exercise 4 Answer - Sunspots   1h

## Course 4 Wrap up

📖 **Reading:** Wrap up   10 min

▶ **Video:** Congratulations!   38 sec

## TensorFlow in practice has come to an end

**Video:** Specialization wrap up - A conversation with Andrew Ng   2 min