

Week 10: Introduction to Time/Sequence Models and ML Deployment

This week, we learn about another specialized category of Deep Learning methods, used specifically for time-series, or sequence models. The ML/DL models we have considered so far consider each input sample independently from the previous one and the outputs do not assume a continuity as well. However, for time and sequence models, the benchmark statistical models are auto regressive moving average (ARMA) models that you will briefly cover followed by a hands-on sample colab assignment where you will see ARMA in action.

Next we will learn about specialized sequence models and their building blocks using deep learning (called long and short term memory LSTM models). Our offline assignment on IMDB reviews using LSTM will help cement our concepts.

Next we will switch gears to the importance and basics of ML Model deployment and deploying at scale. Finally, we learn about ML model deployment using Flask. We review the software basics and do our first deployment exercise.

Week 10: Learning Objectives

- To learn statistical models for time series/sequence modeling
- To learn deep learning model and concepts for sequence modeling
- To learn the basics of ML model deployment
- To learn ML model deployment using Flask.