**Week 4 & 5: Regression Based Time Series Models**

1. Auto Regressive (AR) model:
   1. [What Is an Autoregressive Model? | 365 Data Science](https://365datascience.com/tutorials/time-series-analysis-tutorials/autoregressive-model/)
   2. [How To Forecast Time-Series Using Autoregression | by Egor Howell | Towards Data Science](https://towardsdatascience.com/how-to-forecast-time-series-using-autoregression-1d45db71683)
   3. [8.3 Autoregressive models | Forecasting: Principles and Practice (2nd ed)](https://otexts.com/fpp2/AR.html)
   4. [Time Series Talk : Autoregressive Model](https://youtu.be/5-2C4eO4cPQ) and [AR Model Code Example : Time Series Talk](https://youtu.be/JCKMV0Cuk0k)
2. Moving Average (MA) model:
   1. [Time Series Talk : Moving Average Model](https://youtu.be/voryLhxiPzE) and [MA Model Code Example : Time Series Talk](https://youtu.be/uBYOJfwQeME)
   2. [8.4 Moving average models | Forecasting: Principles and Practice (2nd ed)](https://otexts.com/fpp2/MA.html)
3. AR + Moving Average (ARMA):
   1. [Time Series Talk : ARMA Model](https://youtu.be/HhvTlaN06AM) and [Coding ARMA Model : Time Series Talk](https://youtu.be/xg2-9DhE5vc)
   2. Application of ARMA to stock data: [Predicting Stock Prices and Making $$$ Using the ARMA Model](https://youtu.be/Vyr5dthe-2s)
   3. [What Is an ARMA Model? | 365 Data Science](https://365datascience.com/tutorials/time-series-analysis-tutorials/arma-model/)
   4. [Autoregressive–moving-average model - Wikipedia](https://en.wikipedia.org/wiki/Autoregressive%E2%80%93moving-average_model)
4. AR Integrated Moving Average (ARIMA aka Non-Seasonal ARIMA):
   1. [An Introduction to Time Series Analysis with ARIMA | by Taha Binhuraib | Towards Data Science](https://towardsdatascience.com/an-introduction-to-time-series-analysis-with-arima-a8b9c9a961fb)
   2. [ARIMA Model - Complete Guide to Time Series Forecasting in Python | ML+](https://www.machinelearningplus.com/time-series/arima-model-time-series-forecasting-python/)
   3. <https://youtu.be/3UmyHed0iYE>
   4. Stock Price Prediction: [ARIMA Models for Stock Price Prediction ❌ How to Choose the p, d, q Terms to Build ARIMA Model (1/2)](https://youtu.be/gqryqIlvEoM) and [Stock Price Prediction using ARIMA Models ❌ Forecasting Time Series with Python (2/2)](https://youtu.be/JMT1eGJ9c2M)
5. Seasonal ARIMA (SARIMA):
   1. [A Gentle Introduction to SARIMA for Time Series Forecasting in Python - MachineLearningMastery.com](https://machinelearningmastery.com/sarima-for-time-series-forecasting-in-python/)
   2. [Time Series Talk : Seasonal ARIMA Model](https://youtu.be/WjeGUs6mzXg) and [Coding the SARIMA Model : Time Series Talk](https://youtu.be/Al8m6K_stfA)
6. Special Model: Auto ARIMA
   1. [Using Python and Auto ARIMA to Forecast Seasonal Time Series | by Jose Marcial Portilla | Medium](https://medium.com/@josemarcialportilla/using-python-and-auto-arima-to-forecast-seasonal-time-series-90877adff03c)
   2. [End to End Time Series Modeling using Auto ARIMA](https://youtu.be/MngVV_4l9Po)
   3. [Time Series Modeling Using Auto Arima With Python | by Ulku Guneysu | Better Programming](https://betterprogramming.pub/using-auto-arima-with-python-e482e322f430)

**Week 5 & 6: Volatility Based TIme Series Models**

1. Heteroscedasticity, Predicting Volatility
   1. [Introduction to Heteroscedasticity](https://timeseriesreasoning.com/contents/introduction-to-heteroscedasticity/)
   2. [Heteroscedasticity Analysis in Time Series Data | by Dekha | Python in Plain English](https://python.plainenglish.io/heteroscedasticity-analysis-in-time-series-data-fee51503cc0e)
   3. [How to Detect Heteroskedasticity in Time Series | by Vitor Cerqueira | Towards Data Science](https://towardsdatascience.com/how-to-detect-heteroskedasticity-in-time-series-3413a8aa8da9#:~:text=A%20time%20series%20is%20heteroskedastic,and%20deal%20with%20this%20condition).
   4. [Heteroskedasticity summary](https://youtu.be/zRklTsY9w9c)

2. ARCH (AutoRegressive Conditionally Heteroscedastic) Model:

* 1. [Time Series Talk : ARCH Model](https://youtu.be/Li95a2biFCU)
  2. <https://machinelearningmastery.com/develop-arch-and-garch-models-for-time-series-forecasting-in-python/>
  3. [Time Series Model(s) — ARCH and GARCH | by Ranjith Kumar K | Medium](https://medium.com/@ranjithkumar.rocking/time-series-model-s-arch-and-garch-2781a982b448)

3. GARCH Model:

* 1. [GARCH Model : Time Series Talk](https://youtu.be/inoBpq1UEn4) and [Coding the GARCH Model : Time Series Talk](https://youtu.be/96nSIMS9_Y0) and [Stock Forecasting with GARCH : Stock Trading Basics](https://youtu.be/NKHQiN-08S8)
  2. [Time Series Model(s) — ARCH and GARCH | by Ranjith Kumar K | Medium](https://medium.com/@ranjithkumar.rocking/time-series-model-s-arch-and-garch-2781a982b448)

**Week 6: Model Selection (AIC/BIC)**

1. [Probabilistic Model Selection with AIC, BIC, and MDL - MachineLearningMastery.com](https://machinelearningmastery.com/probabilistic-model-selection-measures/)
2. [Time Series Model Selection (AIC & BIC) : Time Series Talk](https://youtu.be/McEN54l3EPU)
3. **Confidence/Prediction Interval** - [Prediction Interval](https://towardsdatascience.com/time-series-forecasting-prediction-intervals-360b1bf4b085#:~:text=Prediction%20intervals%20are%20used%20to,fall%20within%20the%20prediction%20interval.)