

High Integrity Systems Project

TSA Tasks 05

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Now we are getting to the center in *Time Series Analysis*:

1. Please summarize chapter 12 of the book *Modern time series forecasting with Python*! Explain the training, prediction and forecasting. Especially explain:
 - the *encoder/decoder* idea,
 - the basic *FFN* structure, strengths, weaknesses and applications,
 - the *RNNs*, especially the *LSTM* in detail,
 - the *CNN* models, and
 - the *hybrid models*!
2. Please run the corresponding code of chapter 12, comment the code and explain it! Please explain also errors and how you solved them!
3. Please summarize the ideas of chapter 13 of the book *Modern time series forecasting with Python*!
4. Please run the corresponding code of chapter 13, comment the code and explain it! Please explain also errors and how you solved them!
5. Please analyze and run the code

`https://de.mathworks.com/help/deeplearning/`

`ug/time-series-forecasting-using-deep-learning.html`

from Matlab!

6. As discussed, the group has to provide updated versions of your HIS project document!