**04课 模型集成方法**

* **模型集成**
* **StackNet和mxlend使用**
* **噪音样本与过拟合**

**深度学习模型**

[https://www.kaggle.com/code/aimind/bottleneck-encoder-mlp-keras-tuner-8601c5](https://www.kaggle.com/code/aimind/bottleneck-encoder-mlp-keras-tuner-8601c5" \t "_blank)

[https://unit8co.github.io/darts/quickstart/00-quickstart.html#Ensembling-models](https://unit8co.github.io/darts/quickstart/00-quickstart.html" \l "Ensembling-models" \t "_blank)

如果使用keras：

* 超参数：模型的网络结构、学习率、优化器、early stop、lr的调整
* 对输入的特征的进行归一化，不能包含缺失值

[https://www.kaggle.com/code/lucamtb/very-basis-neural-network](https://www.kaggle.com/code/lucamtb/very-basis-neural-network" \t "_blank)

[https://www.kaggle.com/code/aquatic/shallow-keras-nn-with-upsampling-27-lb](https://www.kaggle.com/code/aquatic/shallow-keras-nn-with-upsampling-27-lb" \t "_blank)

**模型集成方法**

[https://www.kaggle.com/code/thiruloksundar/knn-gbr-impute-voting-xgb-lgbm-cat](https://www.kaggle.com/code/thiruloksundar/knn-gbr-impute-voting-xgb-lgbm-cat" \t "_blank)

[https://www.kaggle.com/code/ch124uec/time-series-hybrid-modeling](https://www.kaggle.com/code/ch124uec/time-series-hybrid-modeling" \t "_blank)

[https://www.kaggle.com/code/andreierofeev/godaddy-sktime-ensembling/](https://www.kaggle.com/code/andreierofeev/godaddy-sktime-ensembling/" \t "_blank)

**时序分析方法**

[https://www.kaggle.com/code/kashnitsky/topic-9-part-1-time-series-analysis-in-python](https://www.kaggle.com/code/kashnitsky/topic-9-part-1-time-series-analysis-in-python" \t "_blank)

[https://www.kaggle.com/code/lucasmorin/dynamic-time-warping-performance-applications](https://www.kaggle.com/code/lucasmorin/dynamic-time-warping-performance-applications/" \t "_blank)

[https://www.kaggle.com/code/ch124uec/time-series-hybrid-modeling#Combined-modeling](https://www.kaggle.com/code/ch124uec/time-series-hybrid-modeling" \l "Combined-modeling" \t "_blank)