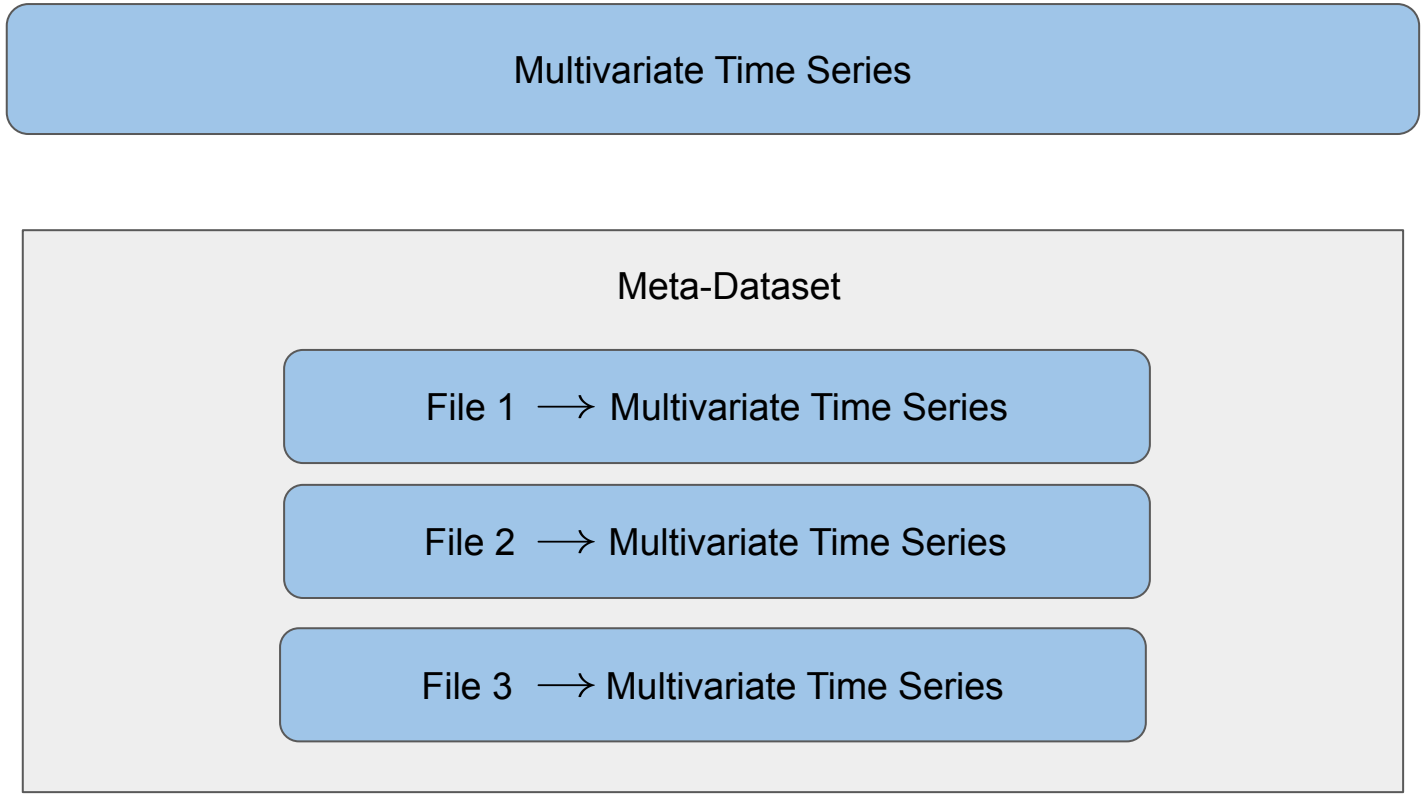
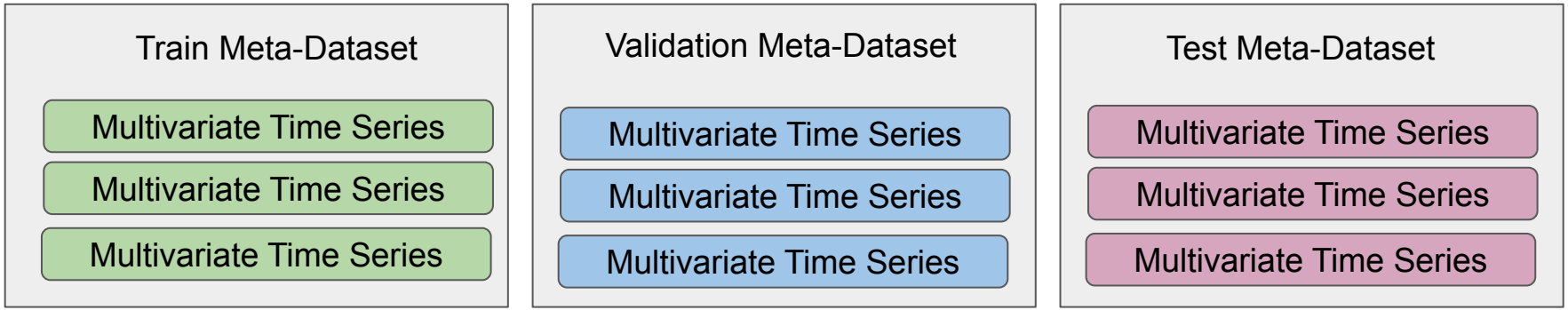
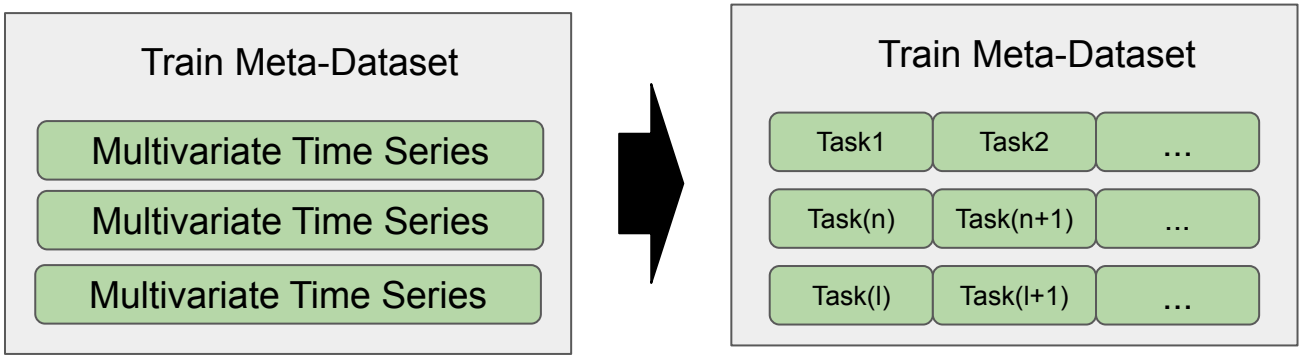
Data splitting and evaluation

Master thesis

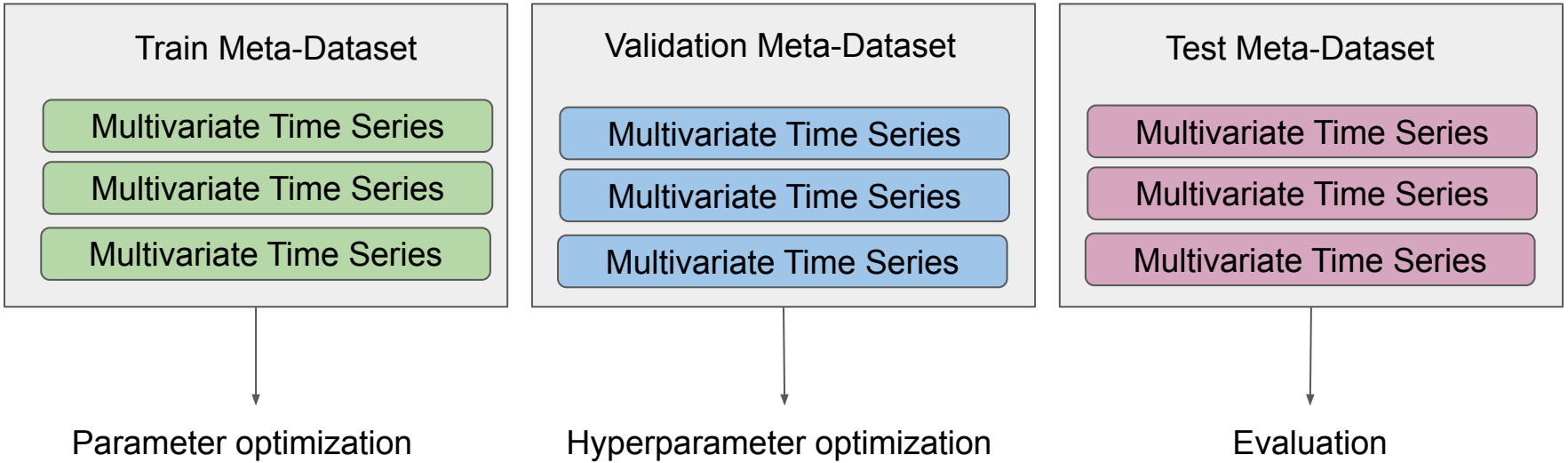
Data splitting


Multivariate Time Series
Meta-Dataset
File 1 ⟶ Multivariate Time Series
File 2 ⟶ Multivariate Time Series
File 3 ⟶ Multivariate Time Series

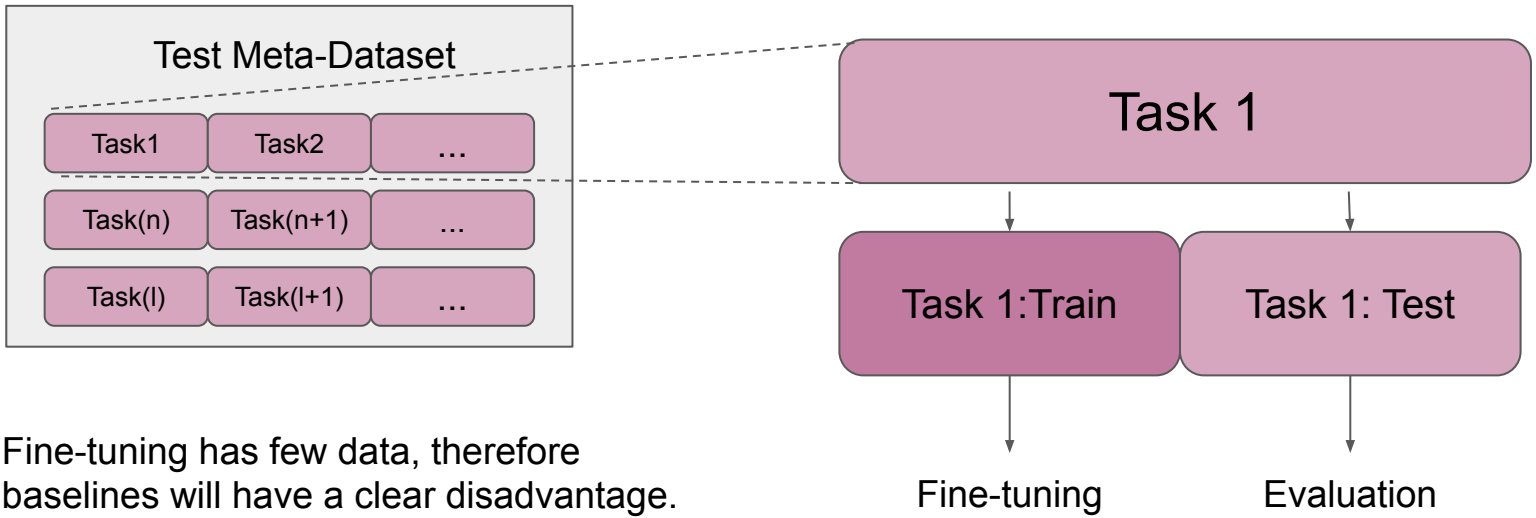

Train Meta-Dataset
Multivariate Time Series
Multivariate Time Series
Multivariate Time Series
Validation Meta-Dataset
Multivariate Time Series
Multivariate Time Series
Multivariate Time Series
Test Meta-Dataset
Multivariate Time Series
Multivariate Time Series
Multivariate Time Series


Train Meta-Dataset
Multivariate Time Series
Multivariate Time Series
Multivariate Time Series
Train Meta-Dataset
Task1
Task2
...
Task(n)
Task(n+1)
...
Task(l)
Task(l+1)
...

Model evaluation

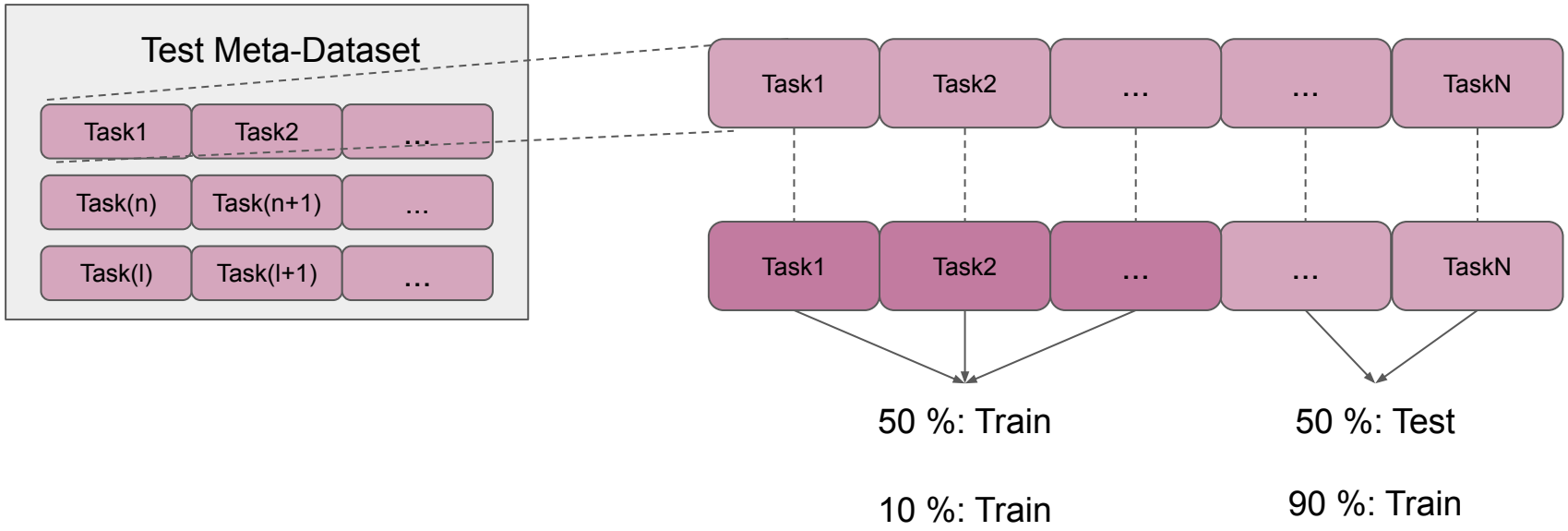

Train Meta-Dataset
Multivariate Time Series
Multivariate Time Series
Multivariate Time Series
Validation Meta-Dataset
Multivariate Time Series
Multivariate Time Series
Multivariate Time Series
Test Meta-Dataset
Multivariate Time Series
Multivariate Time Series
Multivariate Time Series
Parameter optimization
Hyperparameter optimization
Evaluation

Evaluation in Meta-Learning



Fine-tuning has few data, therefore baselines will have a clear disadvantage.

Other Evaluations



Baselines

Baselines

- kNN
- XG-Boost
- **Rocket** (Dempster, A., Petitjean, F., & Webb, G. I. (2020). ROCKET: Exceptionally fast and accurate time series classification using random convolutional kernels. *Data Mining and Knowledge Discovery*, 1-42.)
- **FCN** (Fawaz, H. I., Forestier, G., Weber, J., Idoumghar, L., & Muller, P. A. (2019). Deep learning for time series classification: a review. *Data Mining and Knowledge Discovery*, *33*(4), 917-963.)