

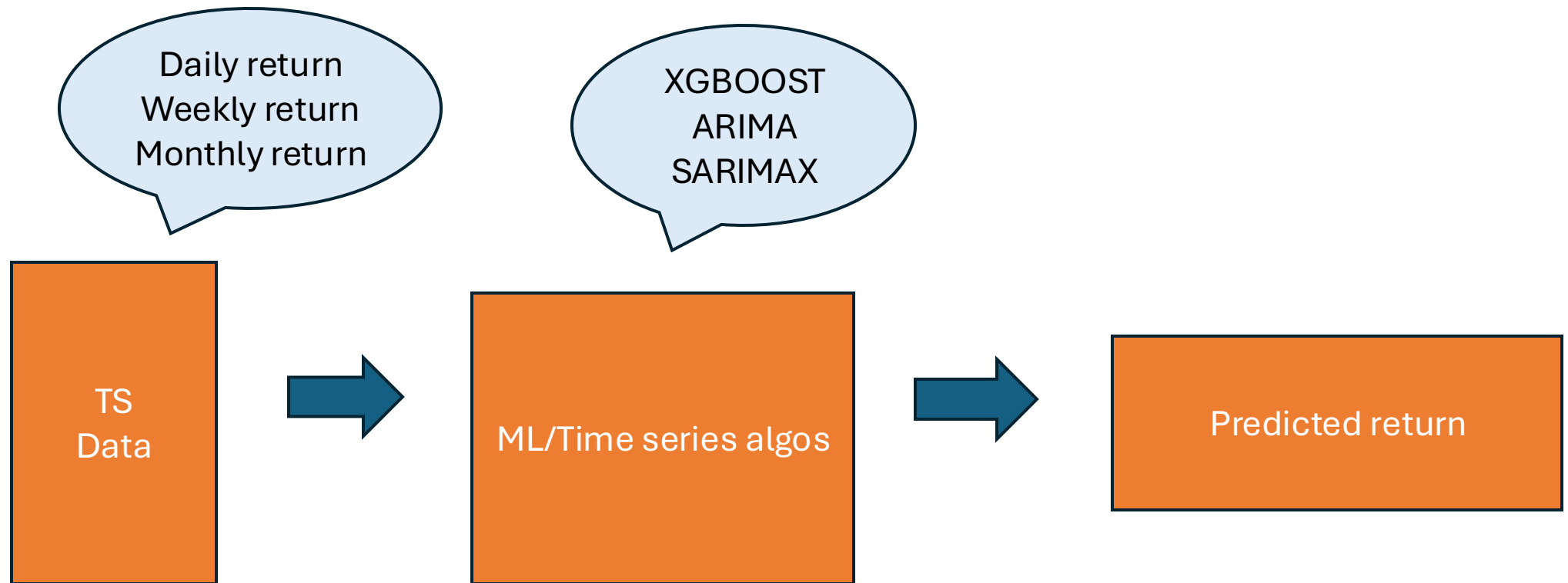
Stock return prediction with stats/ML algos-Sprint 3

Shuyu Liu

Apple stock price

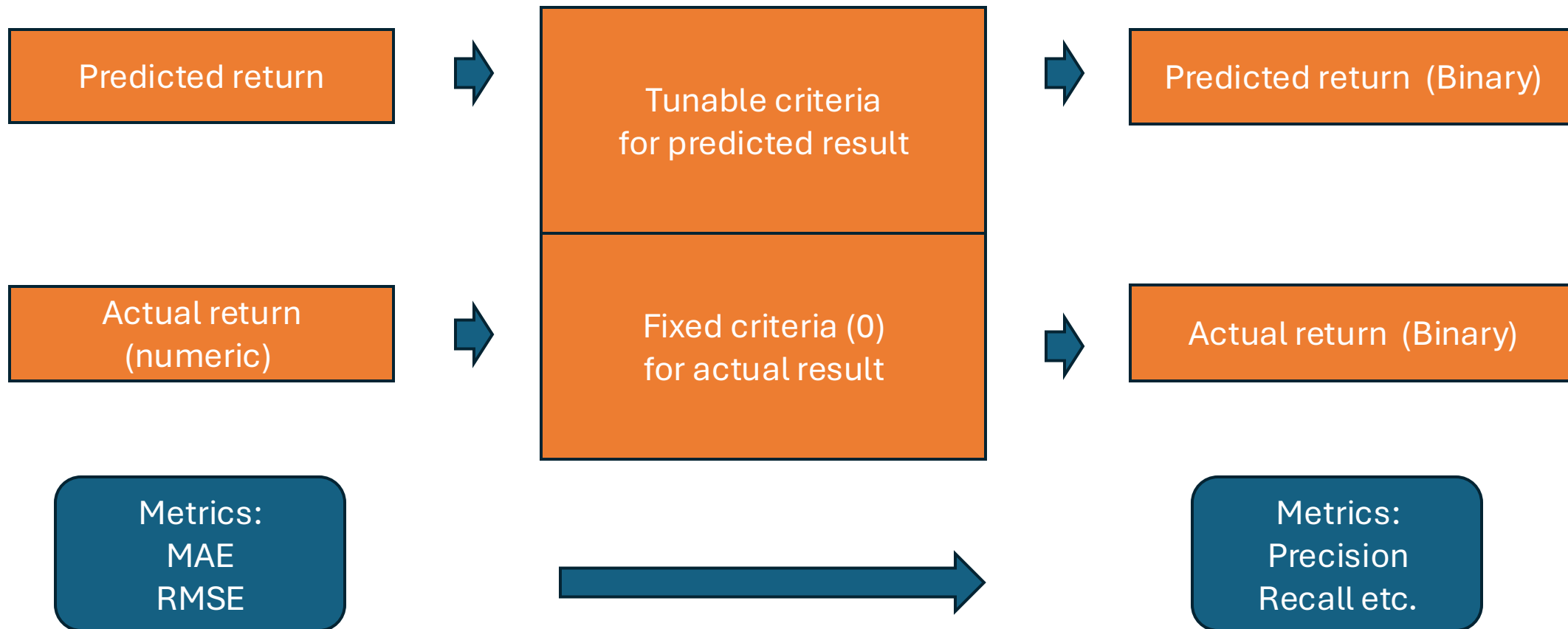


Working flow

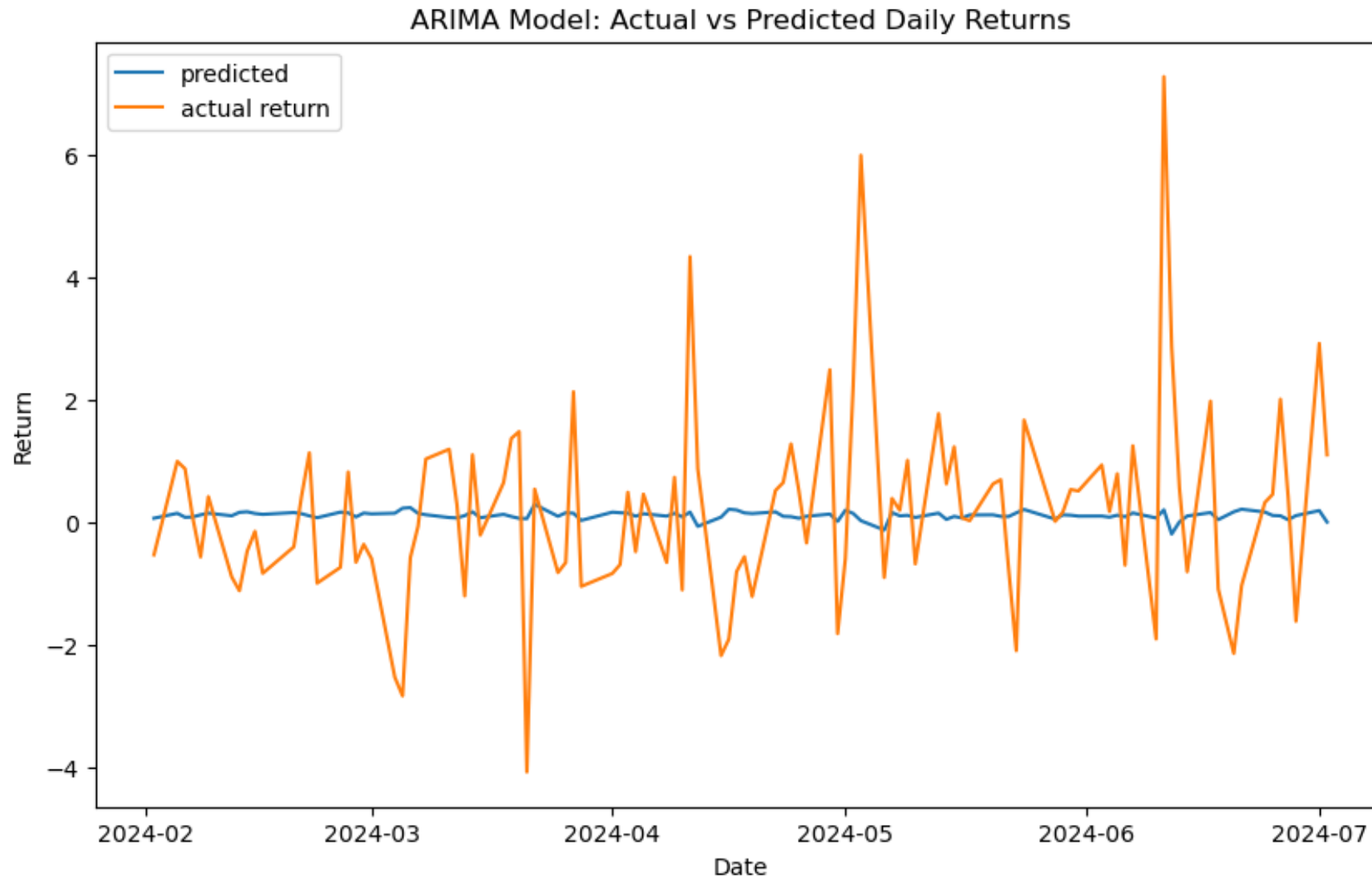


Transformer: turn regression to classification style

$$0 \text{ --- } \text{max}(0, \mu + \sigma)$$

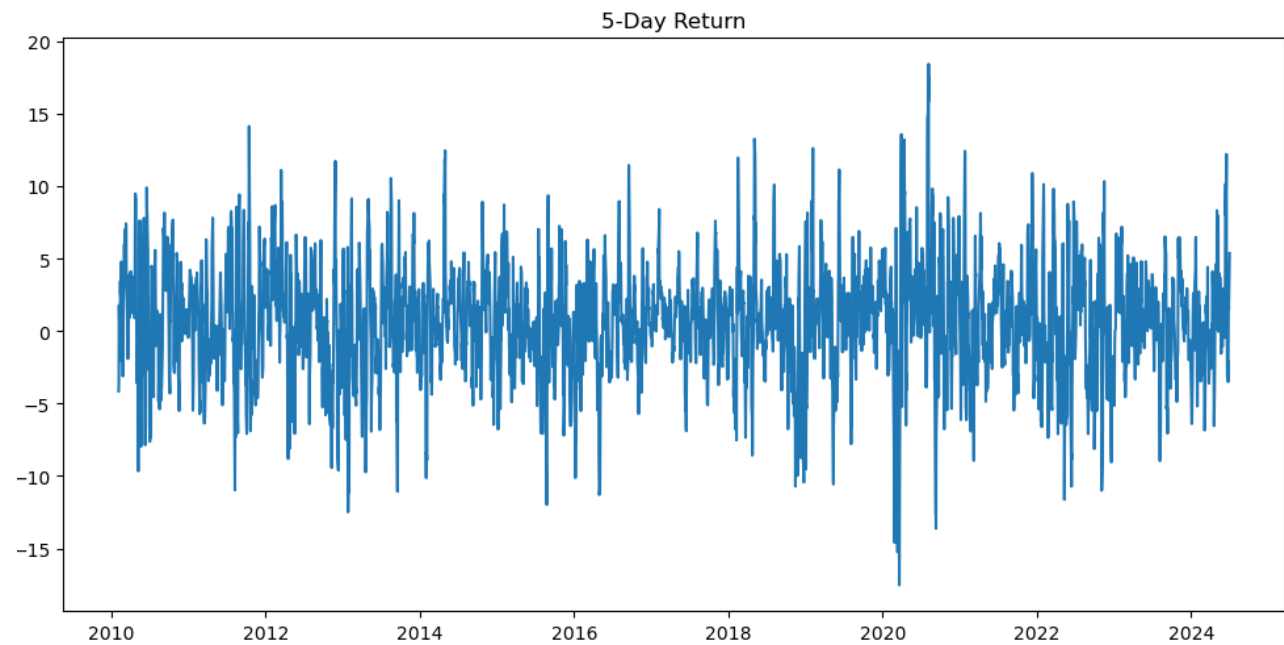
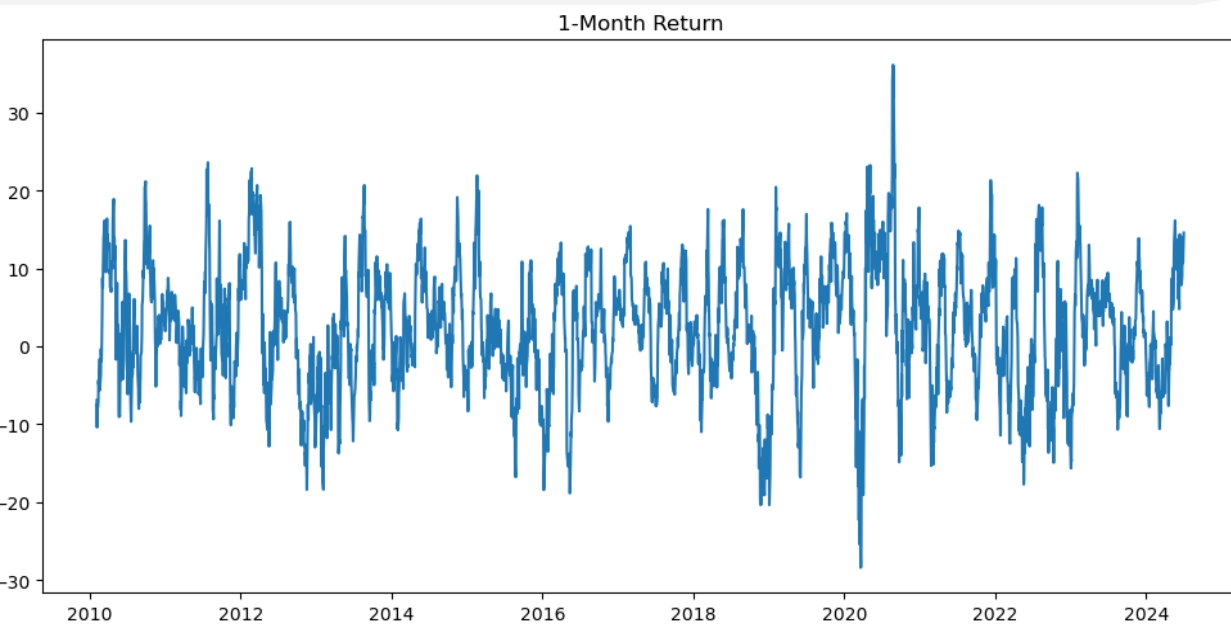
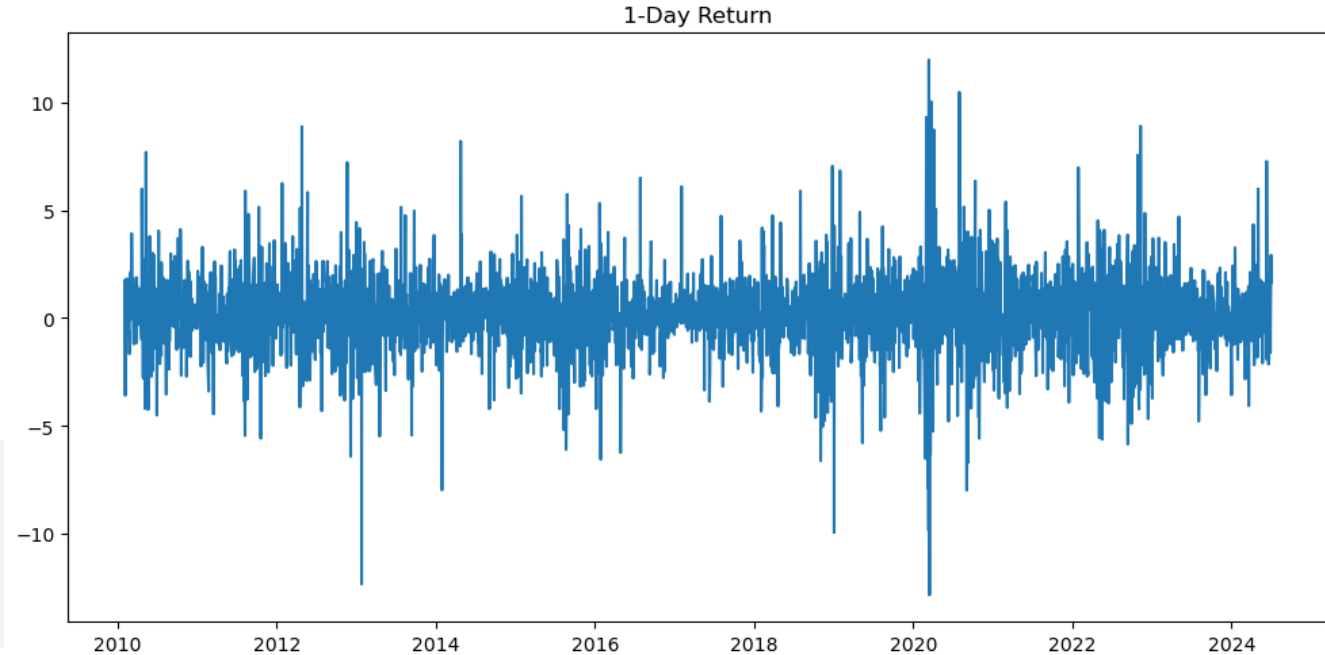


Data: 1-day return predicting is hard

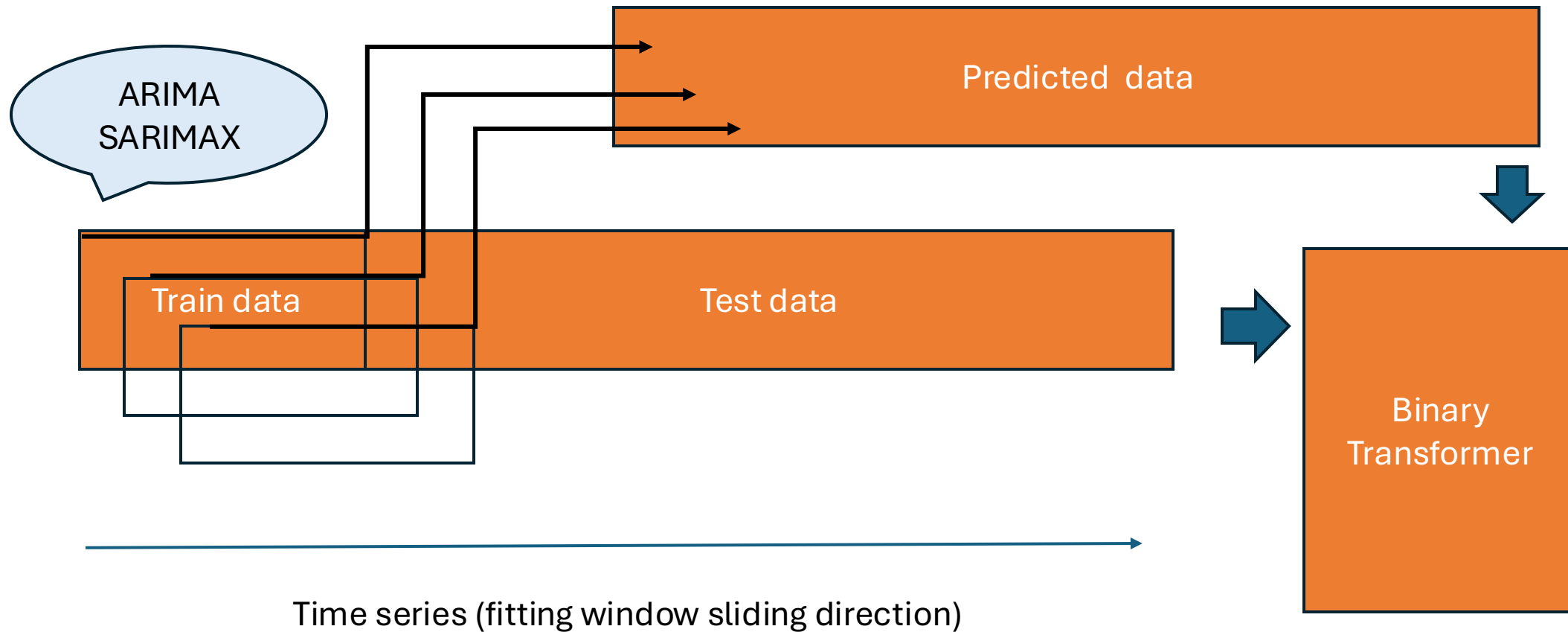


$(p,d,q) = (1,0,0)$

Data: 1-day
return is hard

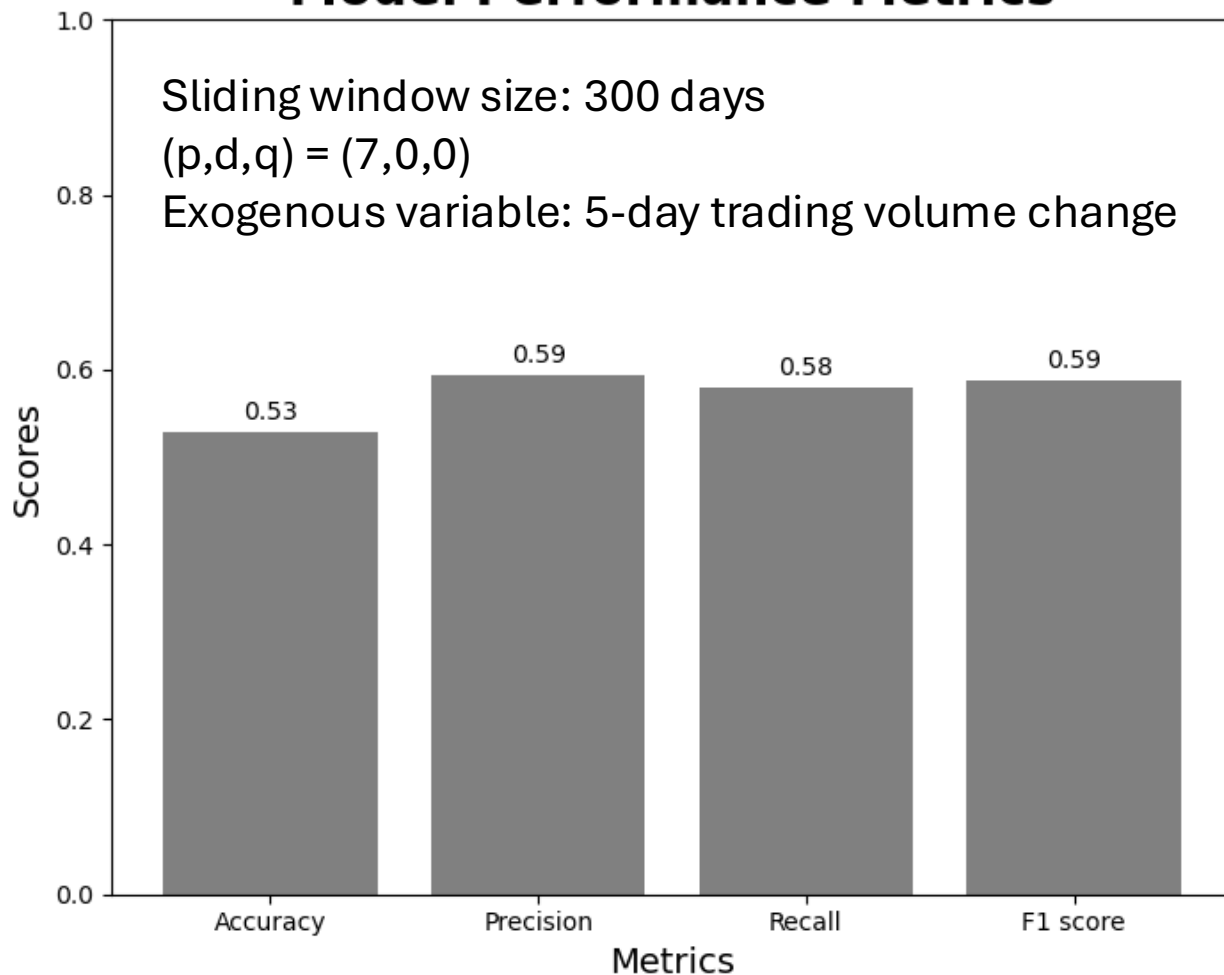


Modelling(I) – Continuous training

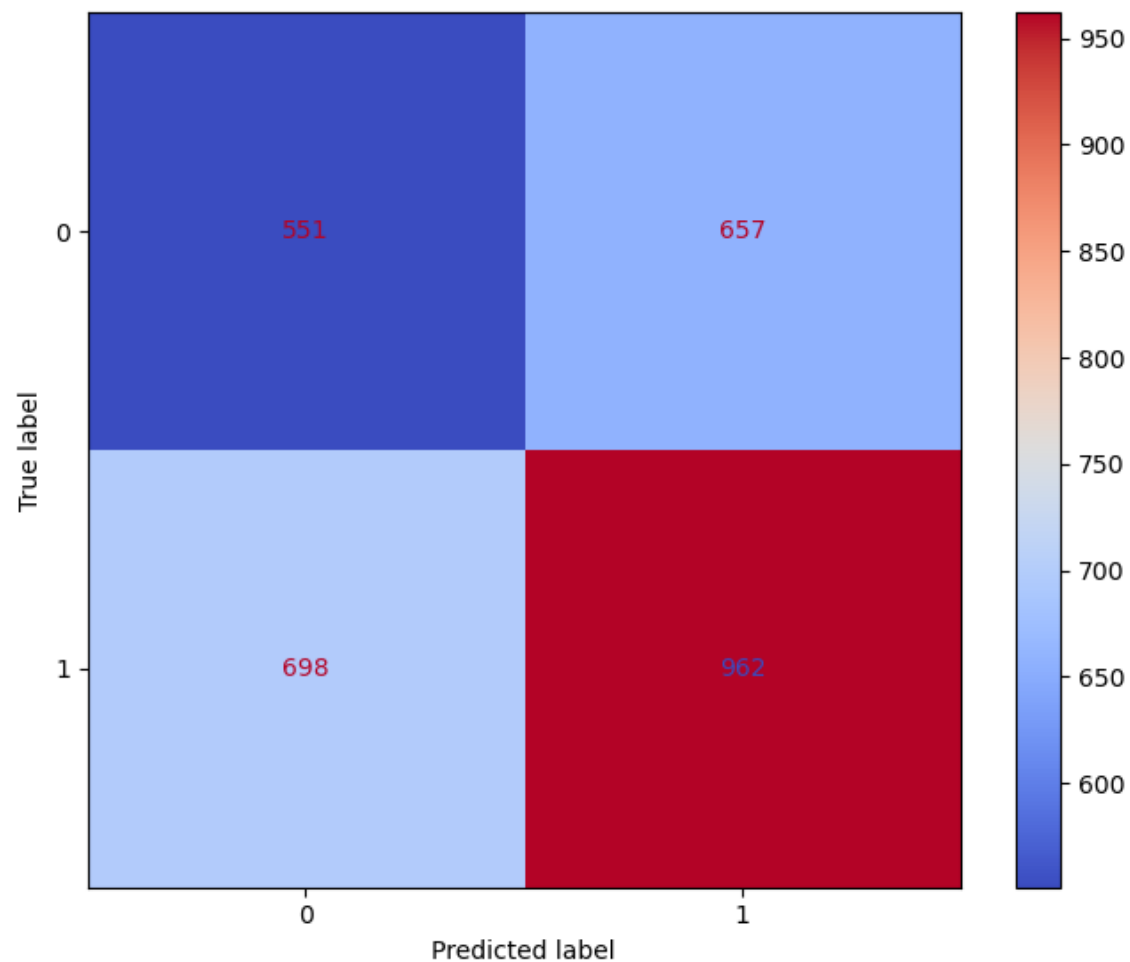


Modelling(II) Long-term validation result

Model Performance Metrics



Confusion Matrix



Working flow reminder

Advantage:

1. Highly comprehensive
2. Good interpretability
3. Closely mimic the real-life situation.

Disadvantage:

1. Is it real? Is there any potential overfitting?
2. Long training time.