

The problem can be described as a two-step approach:

- First creating a model to predict the price of the trade
  - Real-time predictions + production usability
  - Use the model to predict
- Based on the prediction take actions with a trading strategy
  - Define entry and exit thresholds and play with it
  - Use the strategy to maximize the profit based on the predictions

Considerations:

- Real-time recommendation + production:
  - That makes us use a predictive model
    - Certainly, a time-series model to incorporate the temporal features
    - Time-window matters
      - Tried different values, the best was around 2 hours (120 minutes)
  - Additional features required as input features
    - Probably in this problem, hour, weekday also matters
      - A step for features extraction
        - Week Day
        - Hour
    - Optional step for data normalization
- Trading strategy
  - As simple as having entry and exit thresholds
    - Best results with 1.27 as entry and 1.17 as the exit thresholds
      - 0.16
  - Applied the constraint
    - Min = 30 min
    - Max = 60 min