Project Master

1. **Preparation**

**Papers**

* Recent Research (by Pavlos)
* Catalina AGNs Dataset
* Astronomical Time Series
* Time Series Analysis Method
* Attention Model
* Attention Model in Time-Series Analysis / Forecasting

**Tutorials**

* Attention Model

**GitHub**

* AstroML
* AstroCV
* FATs
* Astronomical Time-Series
* Attention Model
* Applications of Attention Model in Time-Series Data

Data Collection

Data Loading

Visualization

1. **Build Model**

Data Pre-processing

* Normalization: Log Normalization
* Take Difference
* Log – Return

Time Series Analysis

* Correlation Test: ACF / PACF
* Model Fitting: MA / AR / ARIMA
* Model Evaluation: AIC / SSE / Q-Test
* Forecasting: Simple / Double / Triple Exponential Smoothing
* Fisher Kernel method with GMM
* Fourier Analysis
* LSTM

1. **Improve Model**