

Authors -

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Group - Keyboard Warriors

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Document where we picked out a group name and assigned project roles and responsibilities to each team member.

## Roles and Responsibilities

### Team Name:

Keyboard Warriors ☆

### Honorable mentions:

5 == 5

Hello, world

### Members:

JT

RIVER

CAMERON

NOAH

NICK

### General Roles:

Productivity Manager + help w/ SRS

Project Manager + Documentation + Scheduling Meetings

Presentation

Testing

Tree Architect + help w/ SDS

### I/O:

read\_from\_file(input\_file\_name)

write\_to\_file(output\_file\_name)

### Preprocessing:

denoise(ts)

impute\_missing\_data(ts)

impute\_outliers(ts)

longest\_continuous\_run(ts)

clip(ts, starting\_date,

final\_date)

assign\_time(ts, start,

increment)

difference(ts)	design_matrix(ts, input_index,
scaling(ts)	output_index)
standardize(ts)	design_matrix(ts, mi, ti, mo,
logarithm(ts)	to)
cubic_root(ts)	
split_data(ts, perc_training,	
perc_valid, perc_test)	

ts2db(input\_filename, perc\_training, perc\_valid, perc\_test, input\_index, output\_index, output\_file\_name)- this function combines reading a file, splitting the data, converting to database, and producing the training databases.

## PLOTTING FUNCTIONS

"plot",  
 "histogram",  
 "box\_plot",  
 "normality\_test",  
 "mse",  
 "mape",  
 "smape"

## Modeling and Forecasting:

mlp\_model(input\_dimension,  
 output\_dimension [, layers]) -  
 defines an ANN Multi-Layer  
 Perceptron model. You may use  
 the same defaults as proposed by  
 sklearn.

mlp.fit(x\_train, y\_train) -  
 trains the mlp model.

mlp.forecast(x) - produces a  
 forecast for the time series's  
 current state, x.

## Trees:

Create new tree - create\_tree()  
 Add operations to tree (add node to tree) - tree.add\_node()  
 Replace operation within tree (replace node) - tree.replace\_node()  
 Replicate subtree - copy\_subtree()  
 Replicate tree path - copy\_path()  
 Add subtree to node - add\_subtree()

save/load tree - `save_tree()` / `load_tree()`

save/load pipeline (made design decision to not include since a pipeline can be considered a tree with only one path)

Execute tree - `tree.execute_tree()`

Execute pipeline - `tree.execute_path()`