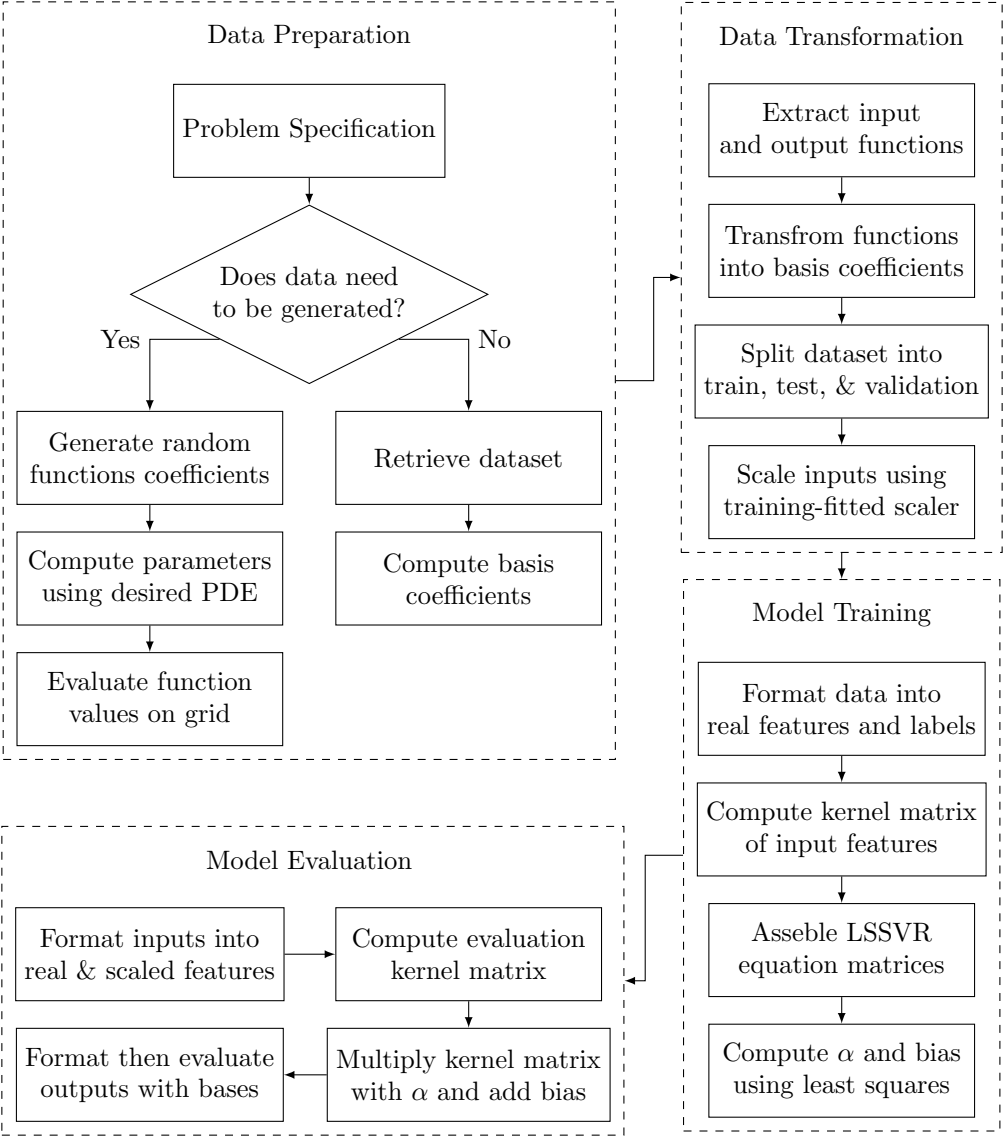
Data Preparation
Problem Specification
Does data need to be generated?
Yes
No
Generate random functions coefficients
Retrieve dataset
Compute parameters using desired PDE
Compute basis coefficients
Evaluate function values on grid
Data Transformation
Extract input and output functions
Transfrom functions into basis coefficients
Split dataset into train, test, & validation
Scale inputs using training-fitted scaler
Model Training
Format data into real features and labels
Compute kernel matrix of input features
Asseble LSSVR equation matrices
Compute α and bias using least squares
Model Evaluation
Format inputs into real & scaled features
Compute evaluation kernel matrix
Multiply kernel matrix with α and add bias
Format then evaluate outputs with bases