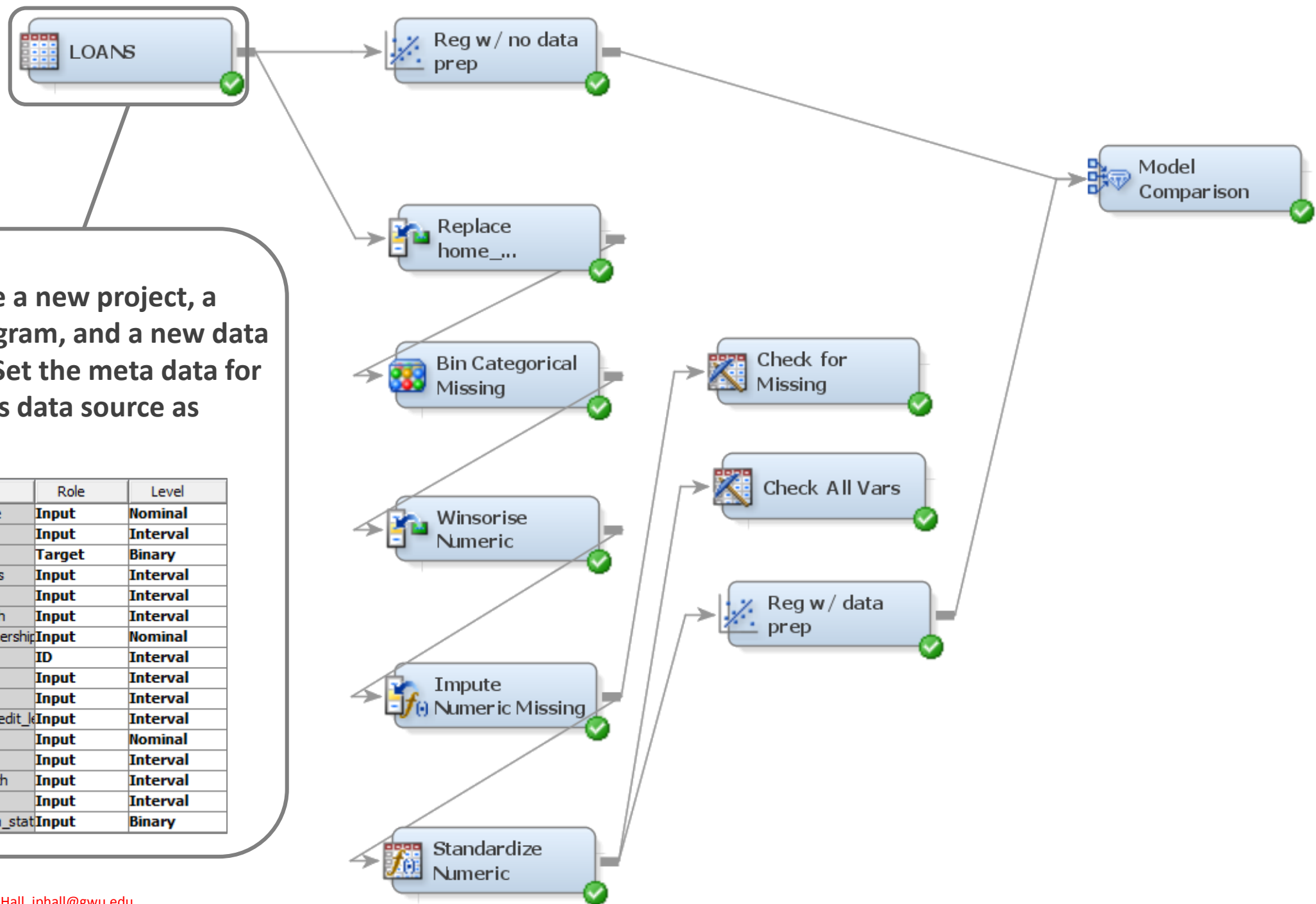
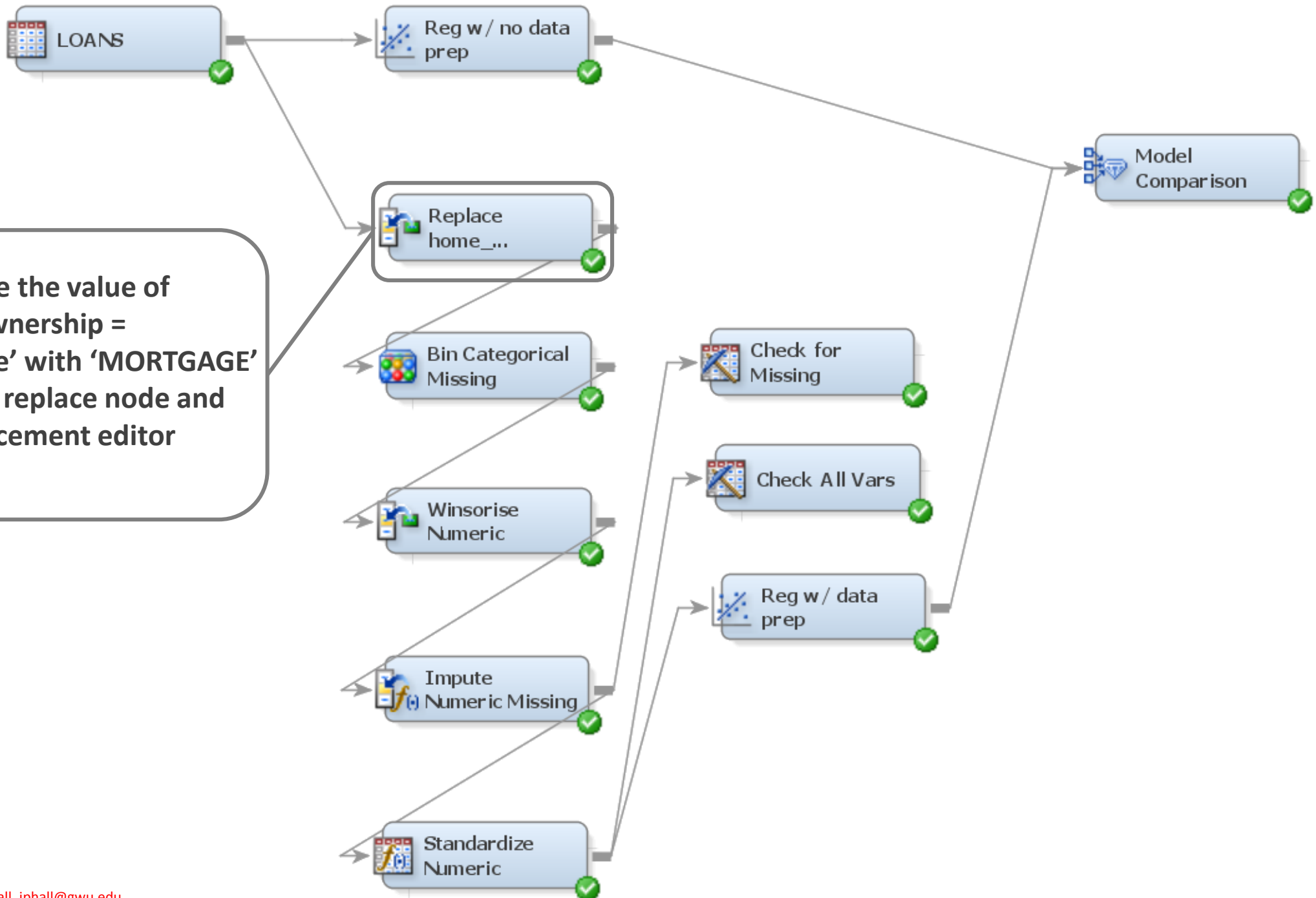


0. Create a new project, a new diagram, and a new data source. Set the meta data for the loans data source as below:

Name	Role	Level
addr_state	Input	Nominal
annual_inc	Input	Interval
bad_loan	Target	Binary
delinq_2yrs	Input	Interval
dti	Input	Interval
emp_length	Input	Interval
home_ownership	Input	Nominal
id	ID	Interval
int_rate	Input	Interval
loan_amnt	Input	Interval
longest_credit_l	Input	Interval
purpose	Input	Nominal
revol_util	Input	Interval
term_length	Input	Interval
total_acc	Input	Interval
verification_stat	Input	Binary

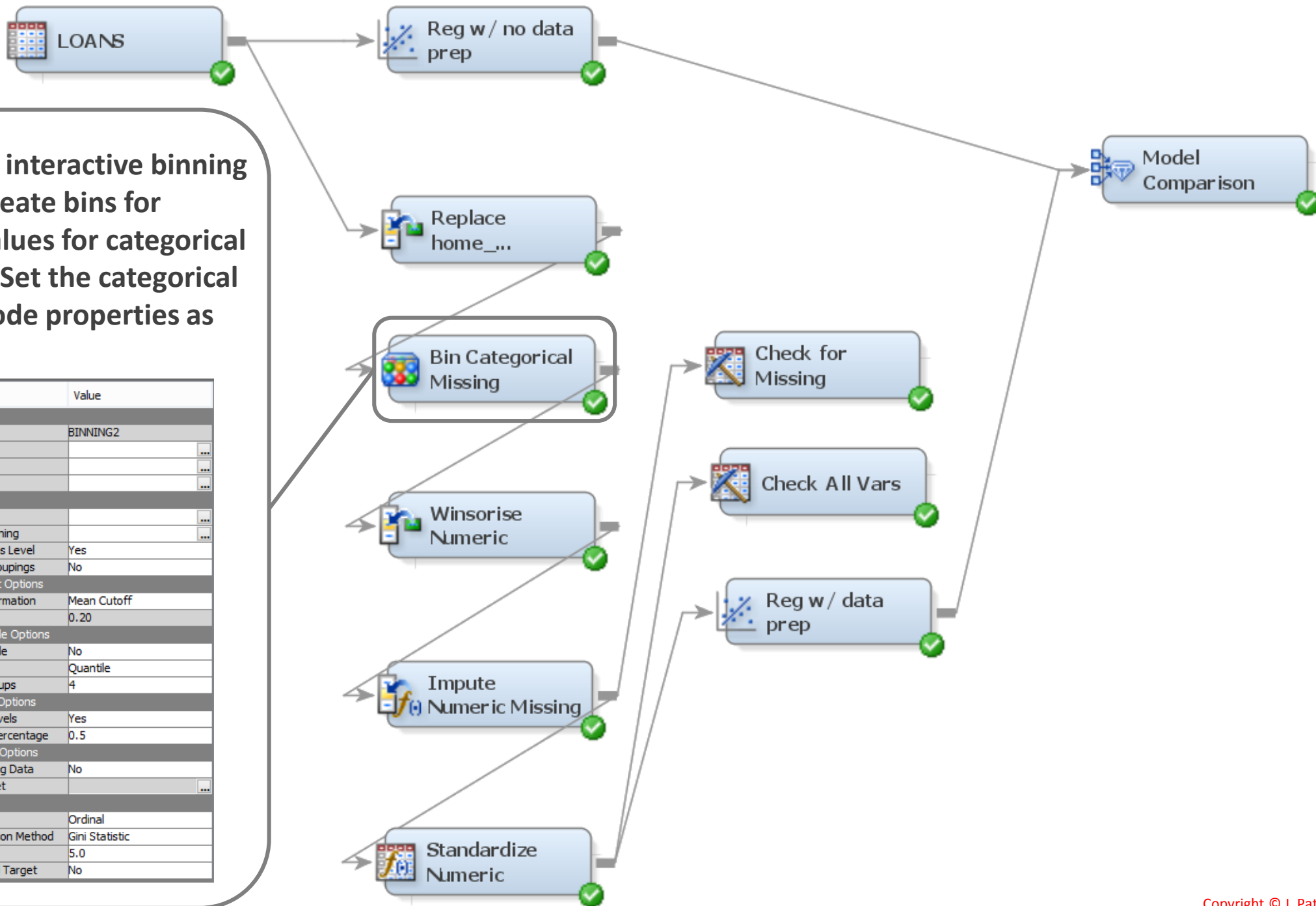


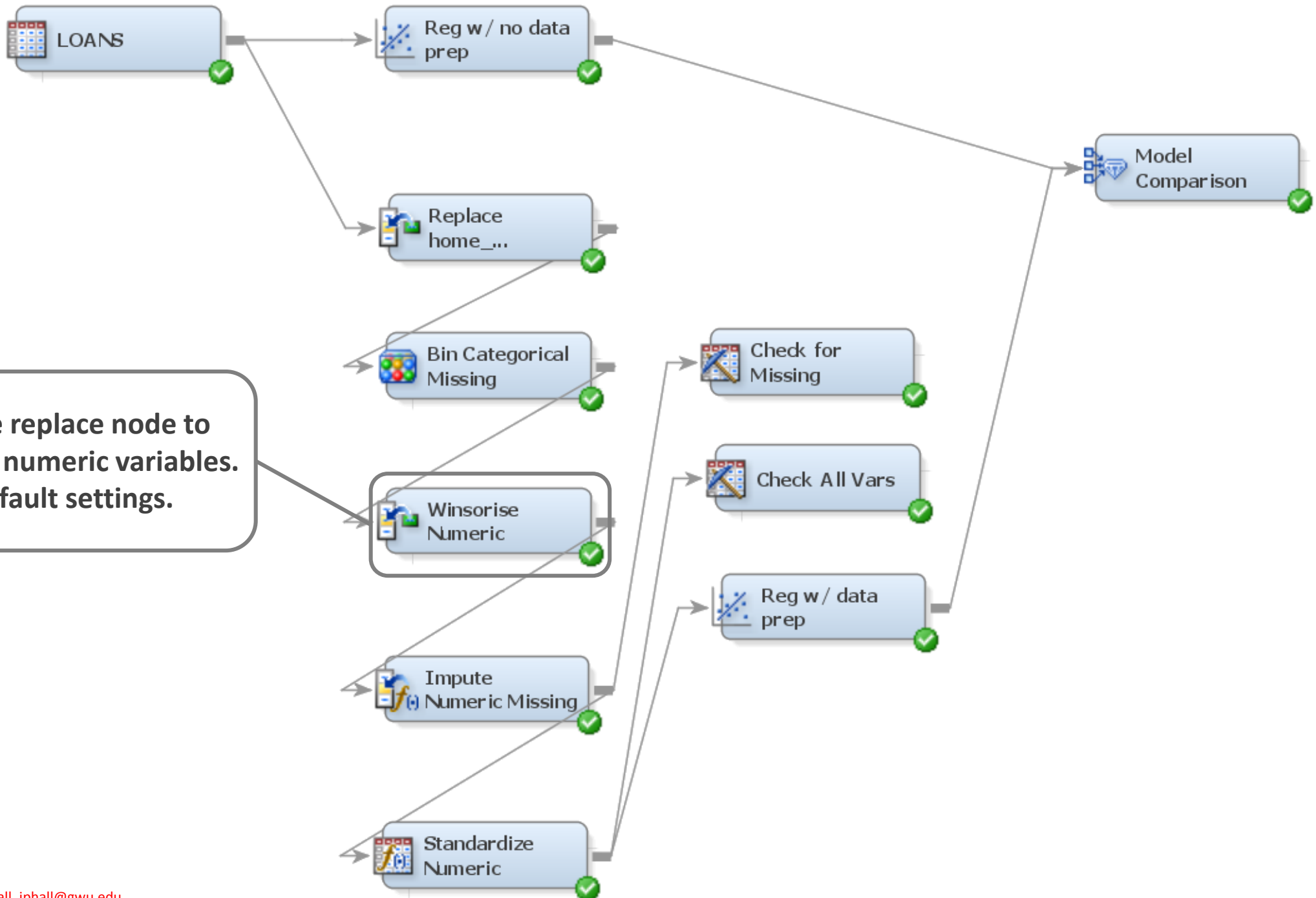


1. Replace the value of home_ownership = 'mortgage' with 'MORTGAGE' using the replace node and the replacement editor window.

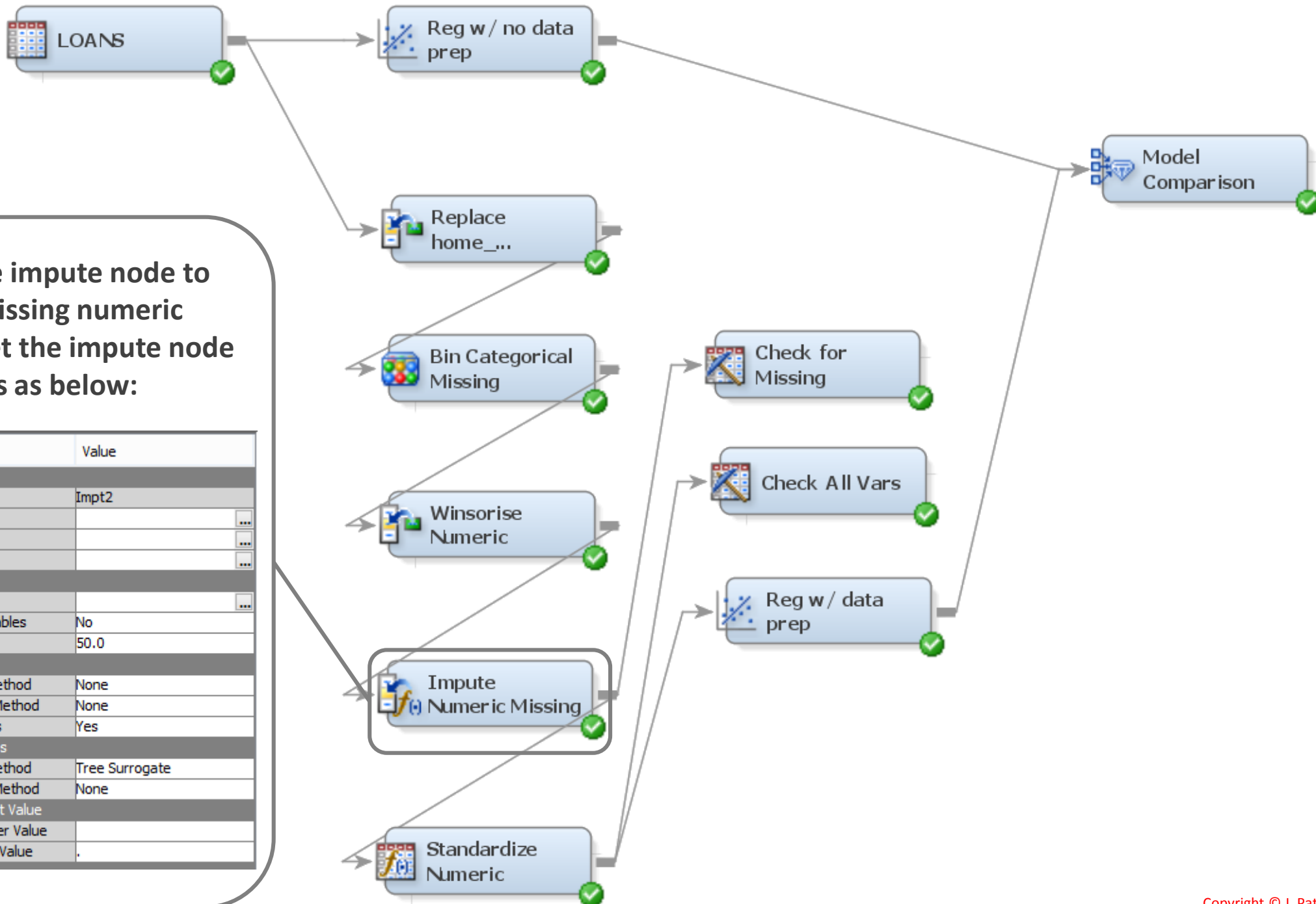
2. Use the interactive binning node to create bins for missing values for categorical variables. Set the categorical binning node properties as below:

.. Property	Value
General	
Node ID	BINNING2
Imported Data	...
Exported Data	...
Notes	...
Train	
Variables	...
Interactive Binning	...
Treat Missing as Level	Yes
Use Frozen Groupings	No
Interval Target Options	
Binary Transformation	Mean Cutoff
Cutoff Value	0.20
Interval Variable Options	
Apply Level Rule	No
Method	Quantile
Number of Groups	4
Class Variable Options	
Group Rare Levels	Yes
Cutoff Value Percentage	0.5
Import/Export Options	
Import Grouping Data	No
Import Data Set	...
Score	
Group Level	Ordinal
Variable Selection Method	Gini Statistic
Gini Cutoff	5.0
Reject Interval Target	No



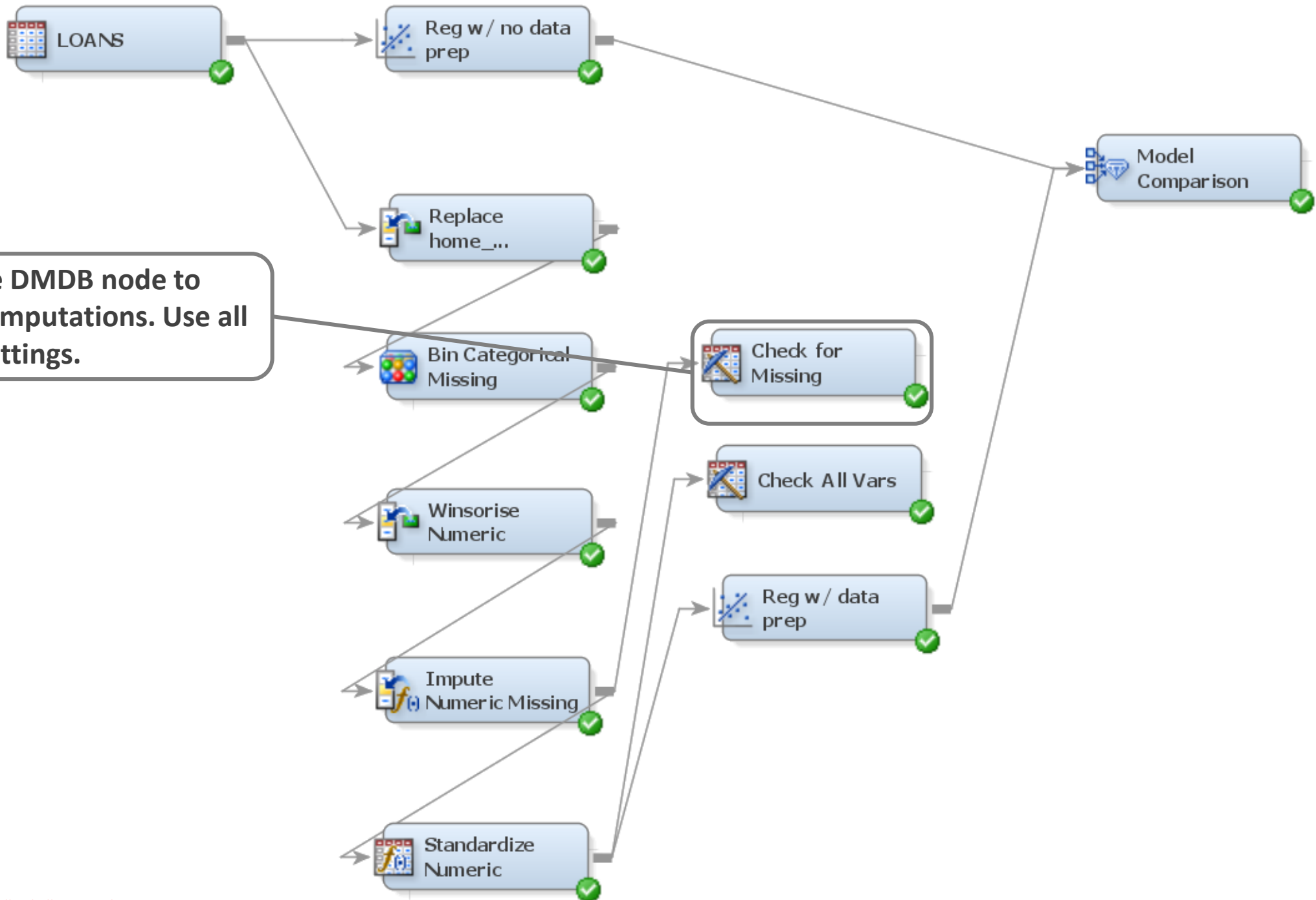


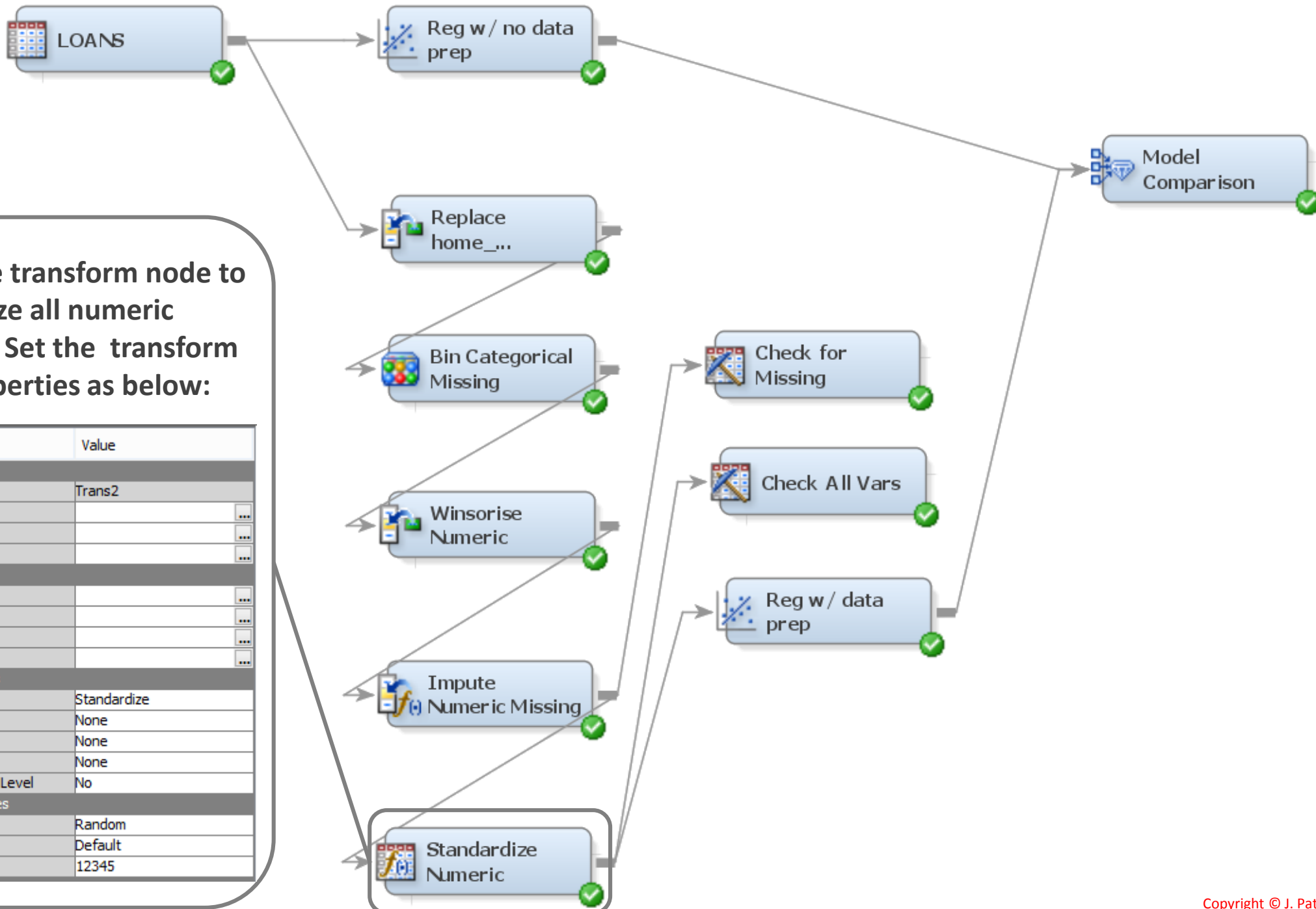
3. Use the replace node to winsorize numeric variables. Use all default settings.



4. Use the impute node to impute missing numeric values. Set the impute node properties as below:

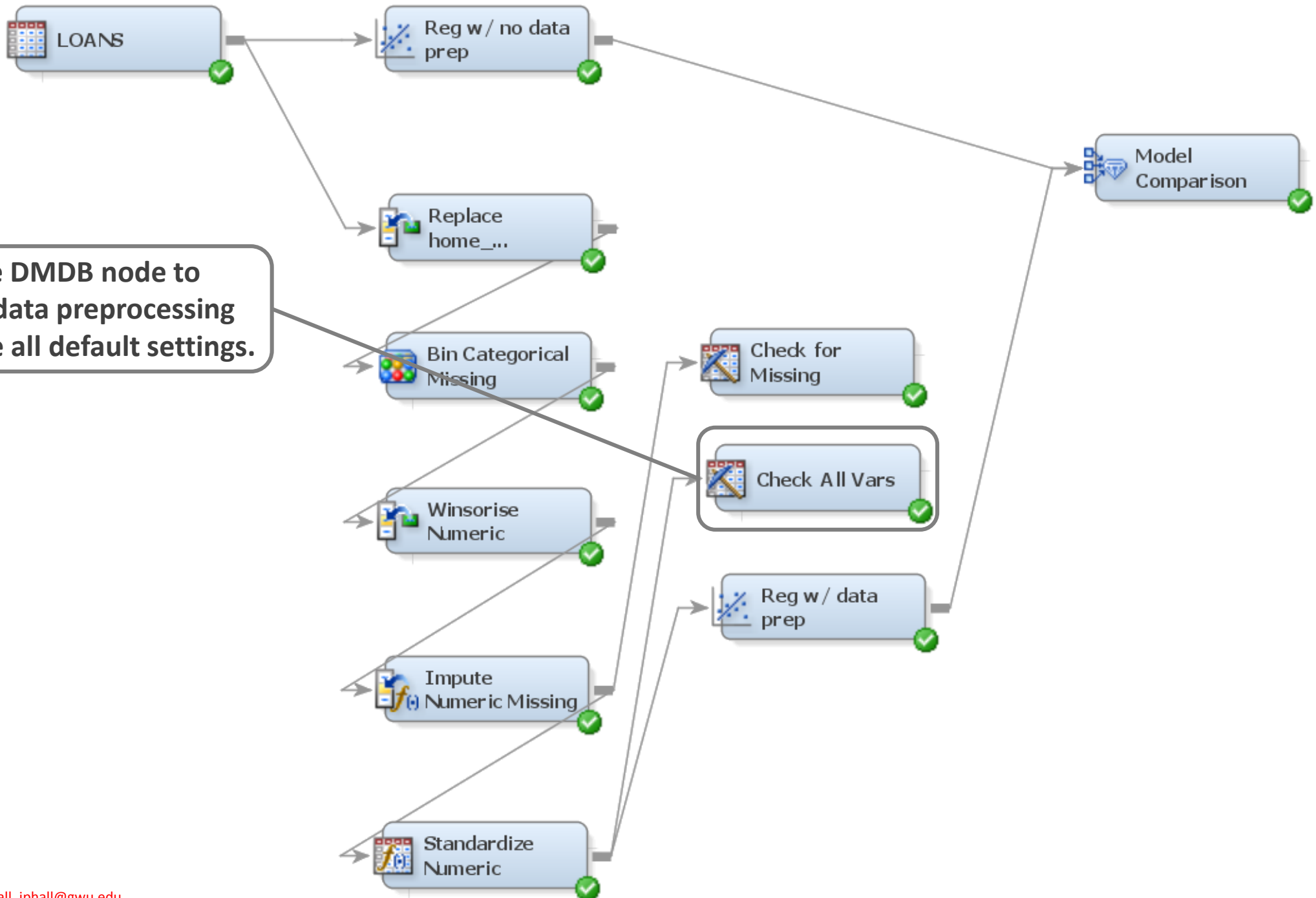
.. Property	Value
General	
Node ID	Impt2
Imported Data	...
Exported Data	...
Notes	...
Train	
Variables	...
Nonmissing Variables	No
Missing Cutoff	50.0
Class Variables	
Default Input Method	None
Default Target Method	None
Normalize Values	Yes
Interval Variables	
Default Input Method	Tree Surrogate
Default Target Method	None
Default Constant Value	
Default Character Value	
Default Number Value	.



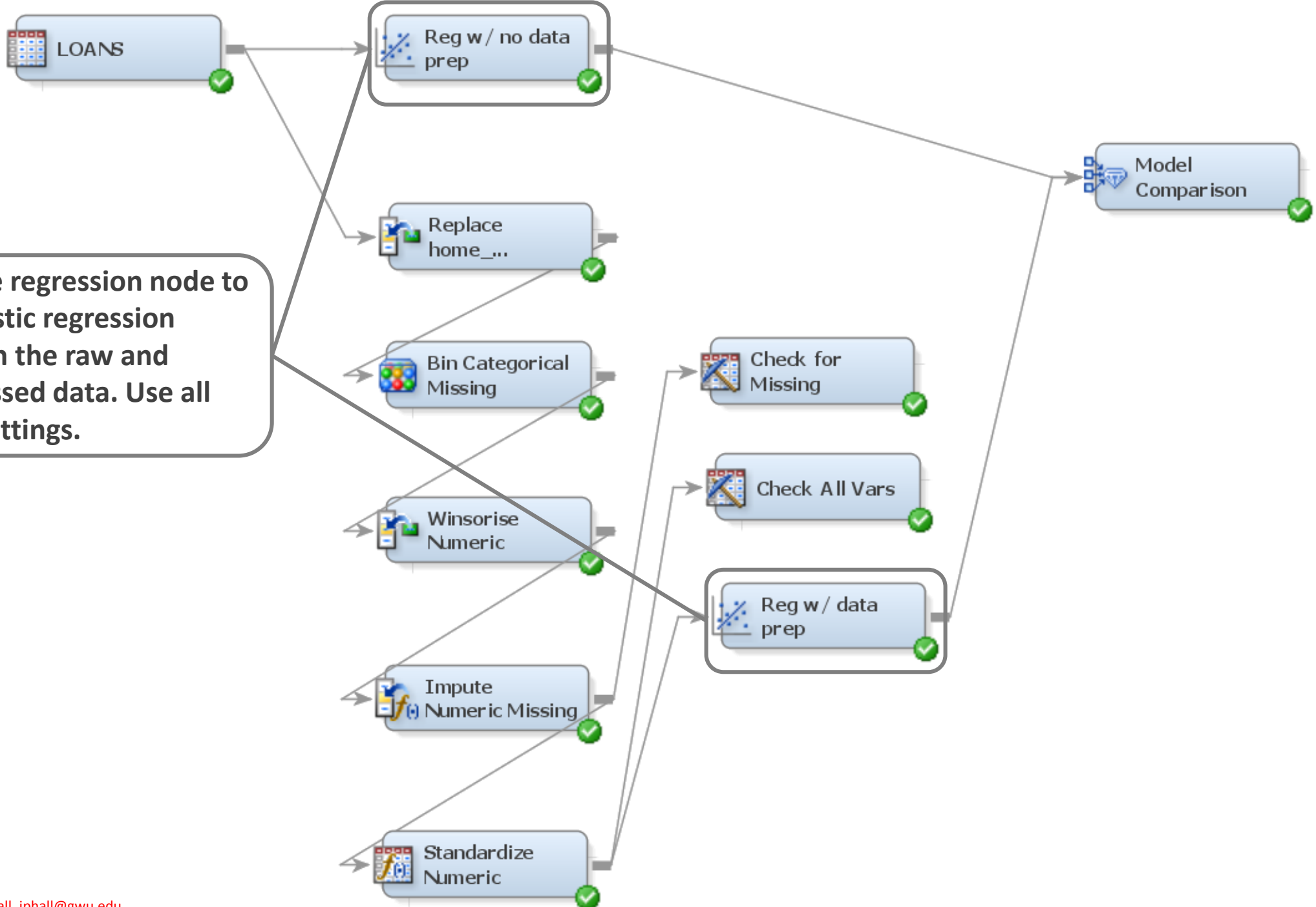


6. Use the transform node to standardize all numeric variables. Set the transform node properties as below:

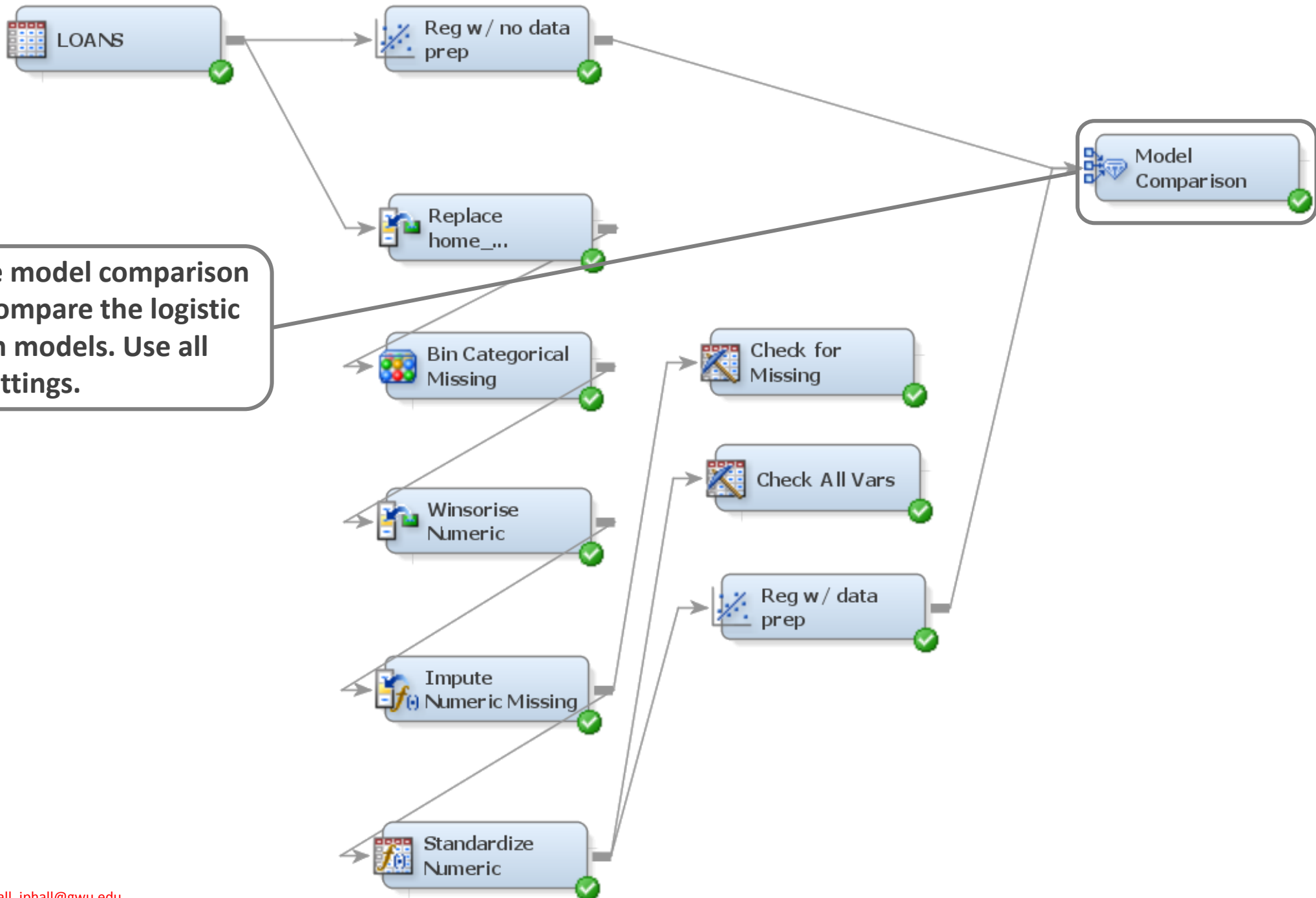
.. Property	Value
General	
Node ID	Trans2
Imported Data	
Exported Data	
Notes	
Train	
Variables	
Formulas	
Interactions	
SAS Code	
Default Methods	
Interval Inputs	Standardize
Interval Targets	None
Class Inputs	None
Class Targets	None
Treat Missing as Level	No
Sample Properties	
Method	Random
Size	Default
Random Seed	12345



7. Use the DMDB node to verify all data preprocessing steps. Use all default settings.



8. Use the regression node to build logistic regression models on the raw and preprocessed data. Use all default settings.



9. Use the model comparison node to compare the logistic regression models. Use all default settings.