MATCH ‘N MERGE

USER UI GUIDANCE

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Launching the Match N Merge Application

1. Install the Flexx package, https://flexx.readthedocs.io/en/latest/
2. Download the latest Match N Merge code by doing a GET on https://github.com/rholbrook98/matchnmerge
3. Locate Jupyter notebook, MatchNMerge.ipynb
4. Ensure that the following files do NOT exist in the current Jupyter notebook folder: results.csv, columnMapping.csv, columnMapping_user.csv, filesReady.txt, status.txt. If any of these exists, delete them on the filesystem
5. Open Jupyter notebook, MatchNMerge.ipynb
    a. Note: Juypter notebook must be run in Firefox, Mozilla
    b. Note: Default download file path for Firefox must be the folder where the notebook is located
6. Select Kernel -> Restart & Run All
    a. Javascript/HTML UI Application will be presented

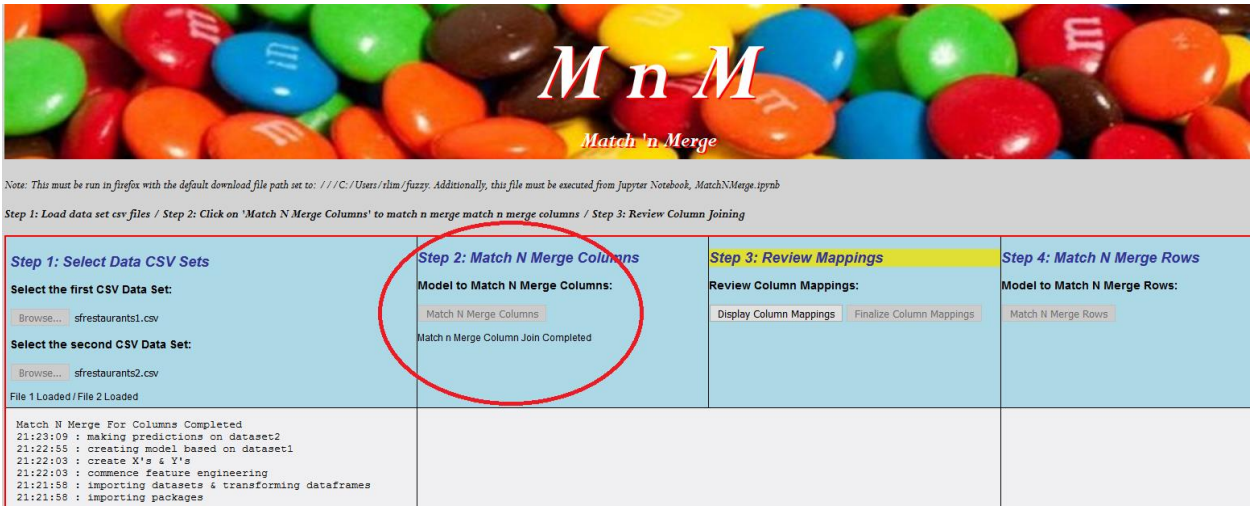
Running the Match N Merge Application

Step 1: Select CSV Data Sets

- Save the CSV file to the same folder as the Juypter notebook (you can set the default file download path in the Firefox browser to download files to that folder)
- Select the first data set (CSV file)
- Select the second data set (CSV file)

Step 2: Match N Merge Columns

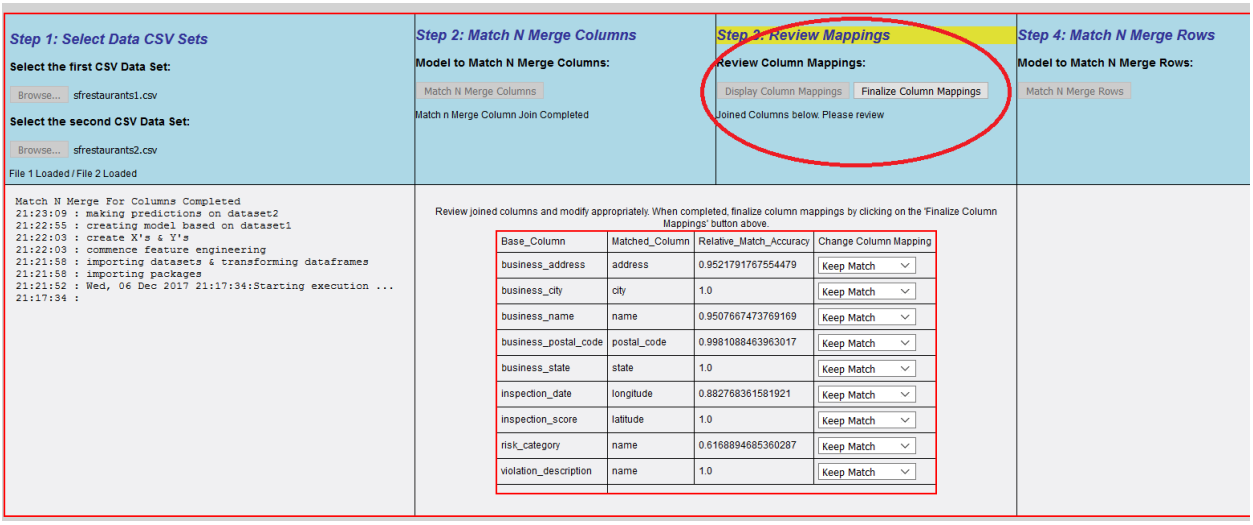
Click on the "***Match N Merge Columns***" button to start the machine learning modeling process to match columns across the two data sets



- Wait for column modeling background python function to complete
- Status box on the bottom left-hand section of the UI informs you when this has completed
- Once completed, the "***Display Column Mappings***" button is enabled

Step 3: Review Mappings

Click on the "***Display Column Mappings***" button to view the best column matches based on the results of the predictive modeling.



Mapping table presented to the user:

Base_Column	Matched_Column	Relative_Match_Accuracy	Change Column Mapping
business_address	address	0.9521791767554479	Keep Match
business_city	city	1.0	Keep Match
business_name	name	0.9507667473769169	Keep Match
business_postal_code	postal_code	0.9981088463963017	Keep Match
business_state	state	1.0	Keep Match
inspection_date	longitude	0.882768361581921	Keep Match
inspection_score	latitude	1.0	Keep Match
risk_category	name	0.6168894685360287	Keep Match
violation_description	name	1.0	Keep Match

Column Mapping Table:

Base_Column: Columns from data set 2

Match_Column: Best column match to data set 1

Relative_Match_Accuracy: Relative measure of column matching modeling performance

Change Column Mapping: Legend:

Keep Match -- keep matching of data set 2 column to data set 1 column

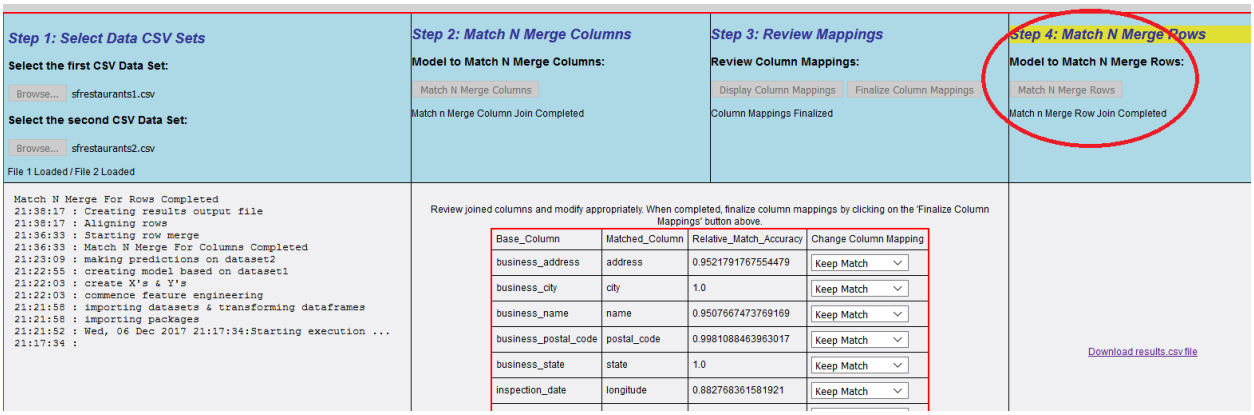
Do Not Match -- do not match these two columns (will be excluded from row match)

Data Set 1 Column Name - match specific data set 1 column to data set 2 column

Click on the "***Finalize Column Mappings***" button to finalize changes.

Step 4: Match N Merge Rows

Click on the "***Match N Merge Rows***" button to start the process of matching rows across the two data sets based on the column matches



Step 1: Select Data CSV Sets

Select the first CSV Data Set:

Browse... sfrestaurants1.csv

Select the second CSV Data Set:

Browse... sfrestaurants2.csv

File 1 Loaded / File 2 Loaded

Step 2: Match N Merge Columns

Model to Match N Merge Columns:

Match N Merge Columns

Match n Merge Column Join Completed

Step 3: Review Mappings

Review Column Mappings:

Display Column Mappings | Finalize Column Mappings

Column Mappings Finalized

Step 4: Match N Merge Rows

Model to Match N Merge Rows:

Match N Merge Rows

Match n Merge Row Join Completed

```
Match N Merge For Rows Completed
21:38:17 : Creating results output file
21:38:17 : Aligning rows
21:36:33 : Starting row merge
21:36:33 : Match N Merge For Columns Completed
21:23:09 : making predictions on dataset2
21:22:55 : creating model based on dataset1
21:22:03 : create X's & Y's
21:22:03 : commence feature engineering
21:21:58 : importing datasets & transforming dataframes
21:21:58 : importing packages
21:21:52 : Wed, 06 Dec 2017 21:17:34:Starting execution ...
21:17:34 :
```

Review joined columns and modify appropriately. When completed, finalize column mappings by clicking on the 'Finalize Column Mappings' button above.

Base_Column	Matched_Column	Relative_Match_Accuracy	Change Column Mapping
business_address	address	0.9521791767554479	Keep Match
business_city	city	1.0	Keep Match
business_name	name	0.9507667473769169	Keep Match
business_postal_code	postal_code	0.9981088463963017	Keep Match
business_state	state	1.0	Keep Match
inspection_date	longitude	0.882768361581921	Keep Match

Download results.csv file

When process has completed, click on the 'Download results.csv file' to view results.