Campaign Contribution (2012) Data Mining

Jin, Hans, Felix

Data Source

- https://app.enigma.io/table/us.gov.fec.summary.2012?row=0&col=31&page=1

Oracle SQL Developer : hau72 on PDBORCL/Project Contributions/workflow

File Edit View Navigate Run Diagram Team Tools Window Help

Connections | Data Miner | Start Page | workflow | Retiree's Contributions | SQL Query 1 | CLAS_DT_9_149 | CLAS_DT_1_216 | SQL Query | Prediction Query...

50% | Parallel Query Off

Connections
- DS_CONTRIBUTIONS on PDBORCL
- hau72 on PDBORCL
  - Accidents at Class
  - New Project
  - Project1
  - Project Contributions
    - Retiree's Contributions
    - Predict M-F contributions
    - workflow
- jhk924
  - Contribution
    - workflow
    - workflow1

Workflow Jobs

hau72 on PDBORCL

Workflow	Project	Status
Retiree's Cont...	Project Contri...	✓
workflow	Project Contri...	✓

Components

Workflow Editor

- Data
- Transforms: Aggregate, Filter Columns, Filter Columns, Filter Ro
- Text
- Models: Anomaly Detection, Association, Classification, Clustering, Feature Extraction, Model
- Predictive Queries
- Evaluate and Apply
- Linking Nodes

Regress Build 2 - Properties

Find

Models

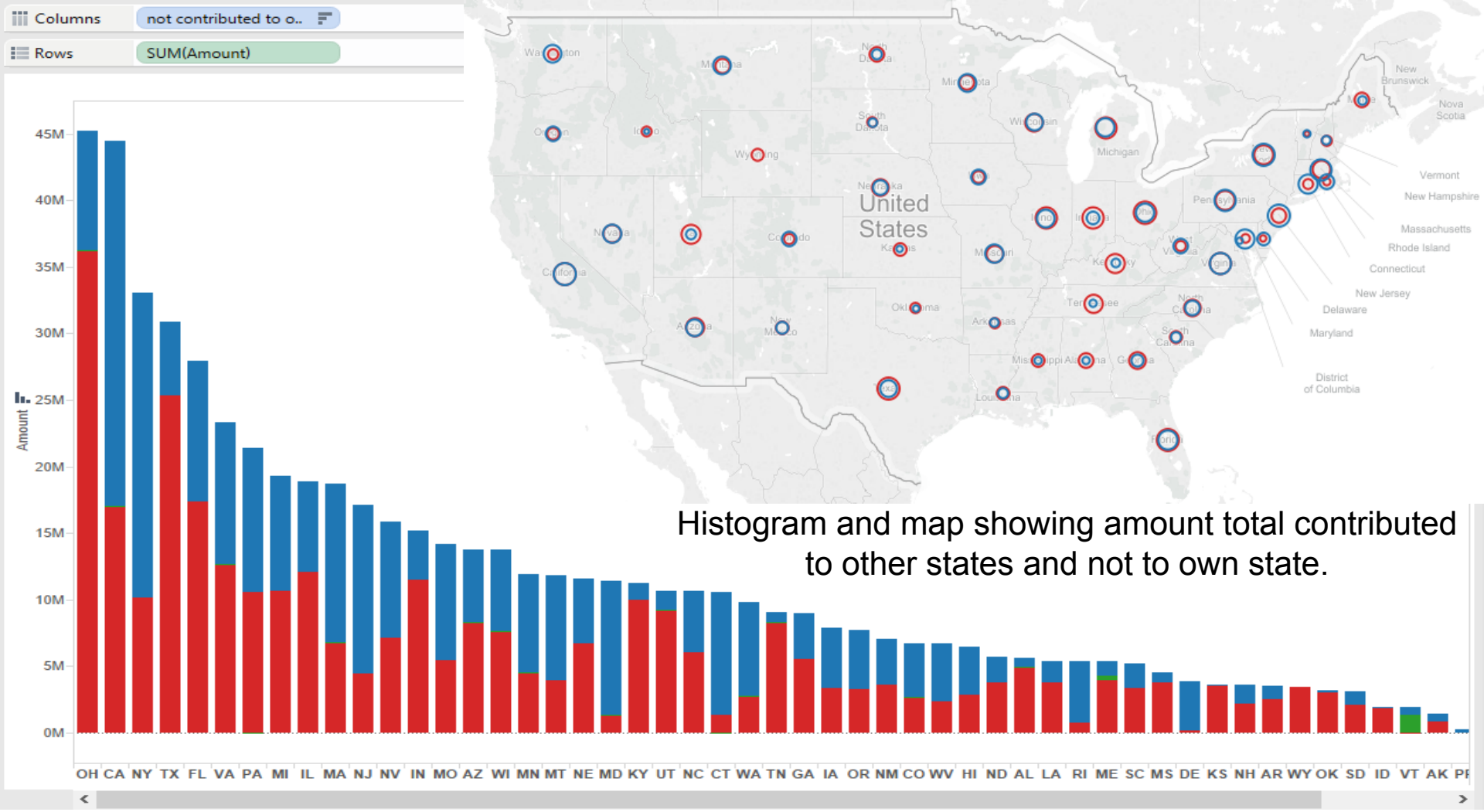
Model Settings

Name	Output	Build
REGR_GLM_3_149	→	Not buil
REGR_SVM_3_149	→	Not buil

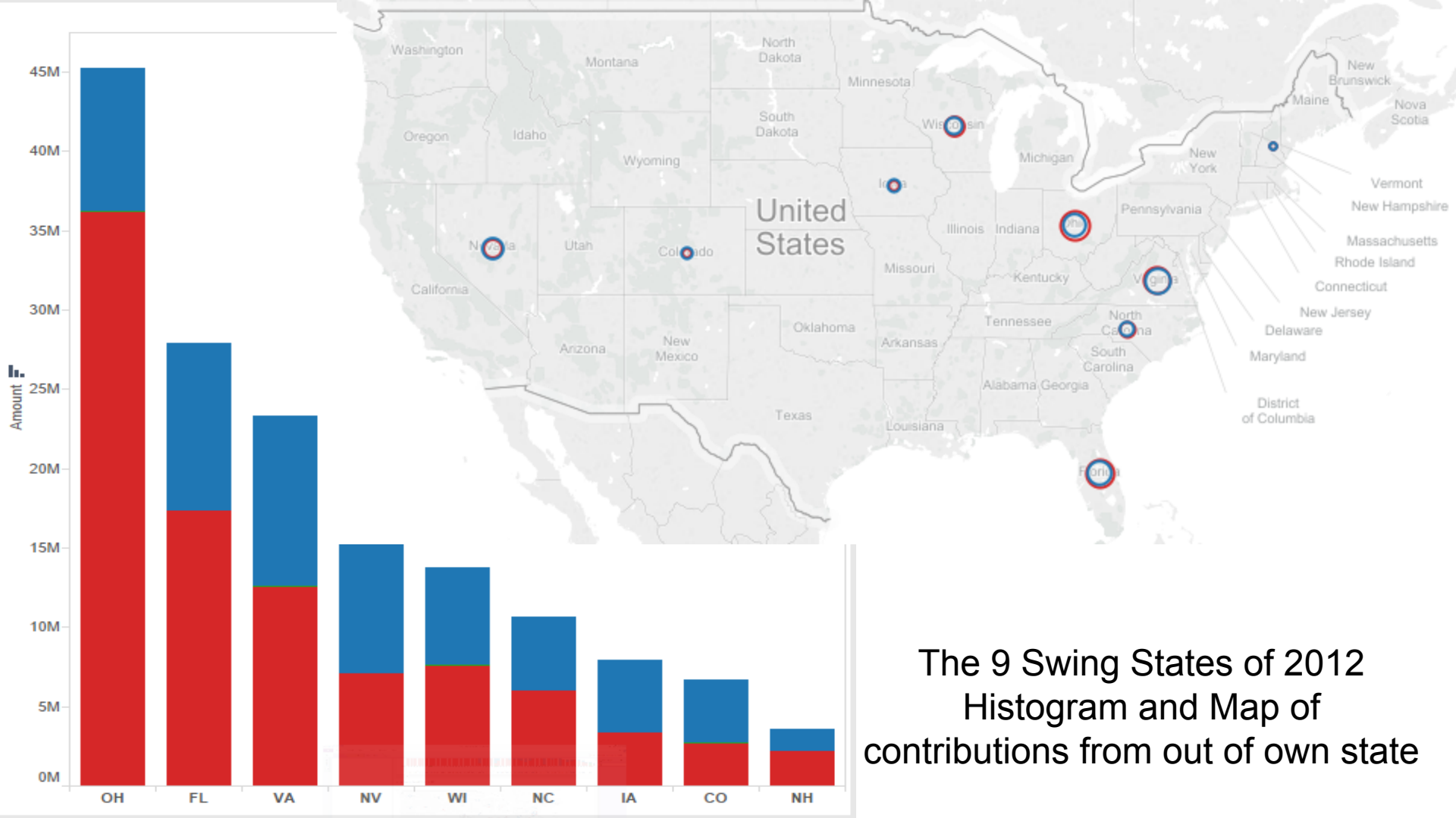
Messages - Log

Messages | Logging Page

Saved files(1)

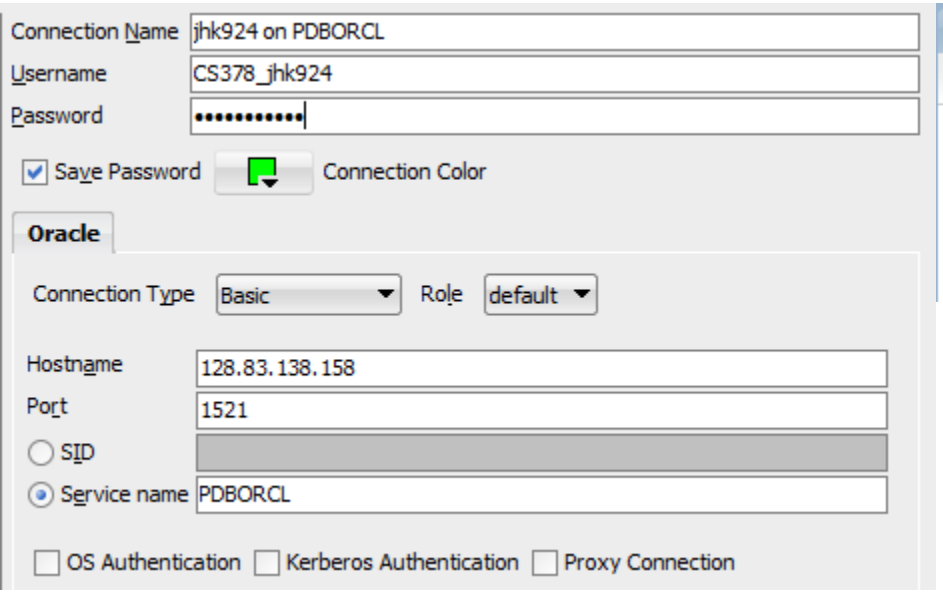


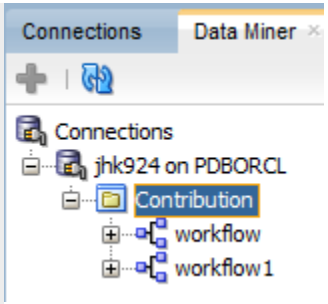
Histogram and map showing amount total contributed to other states and not to own state.

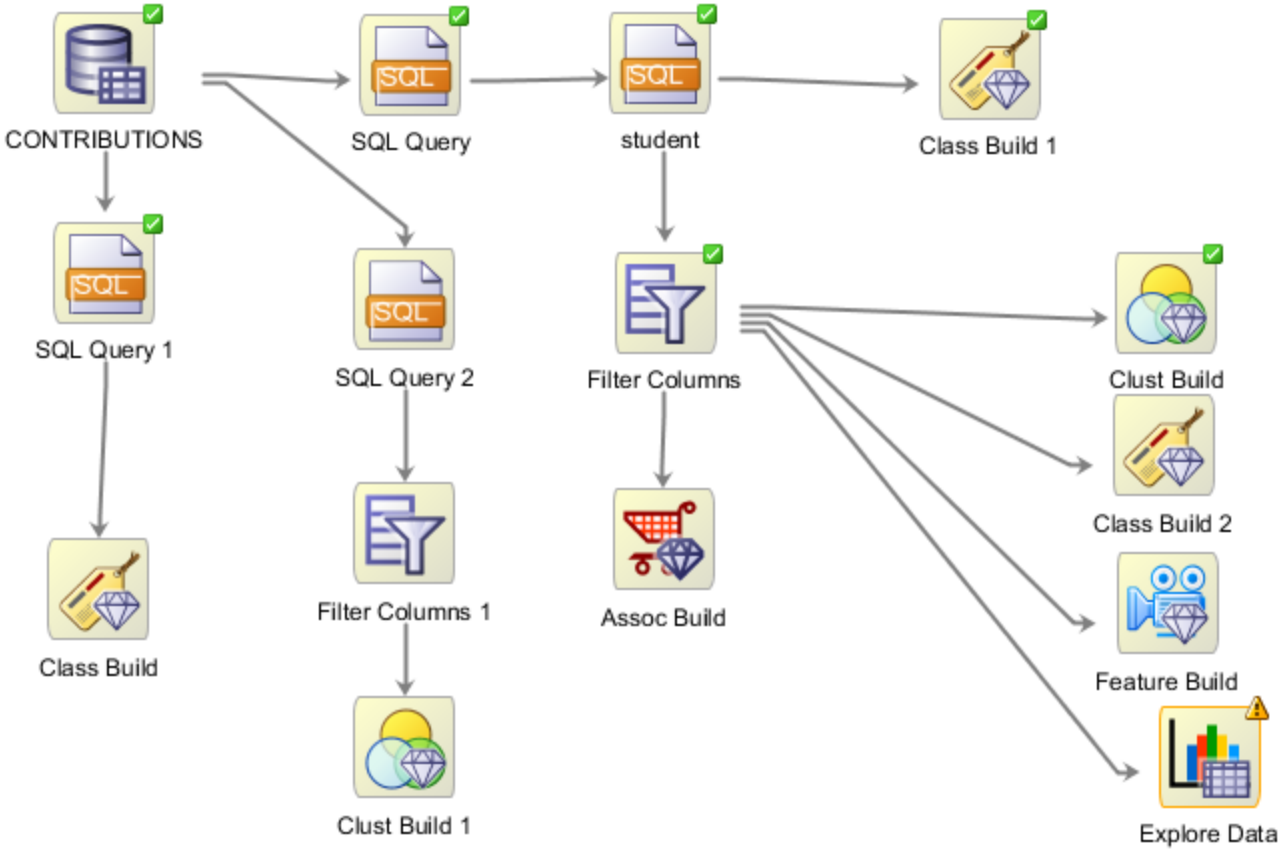


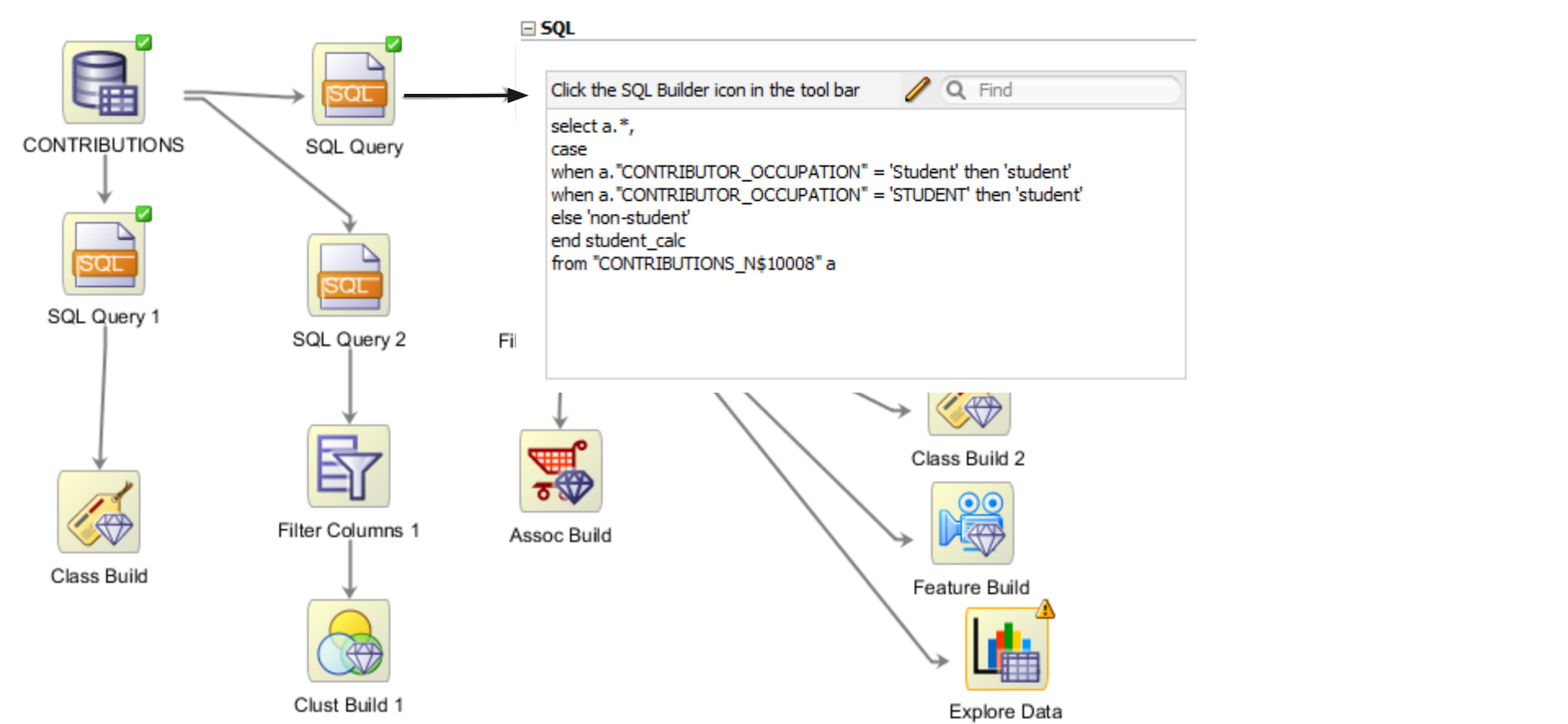
The 9 Swing States of 2012
Histogram and Map of
contributions from out of own state

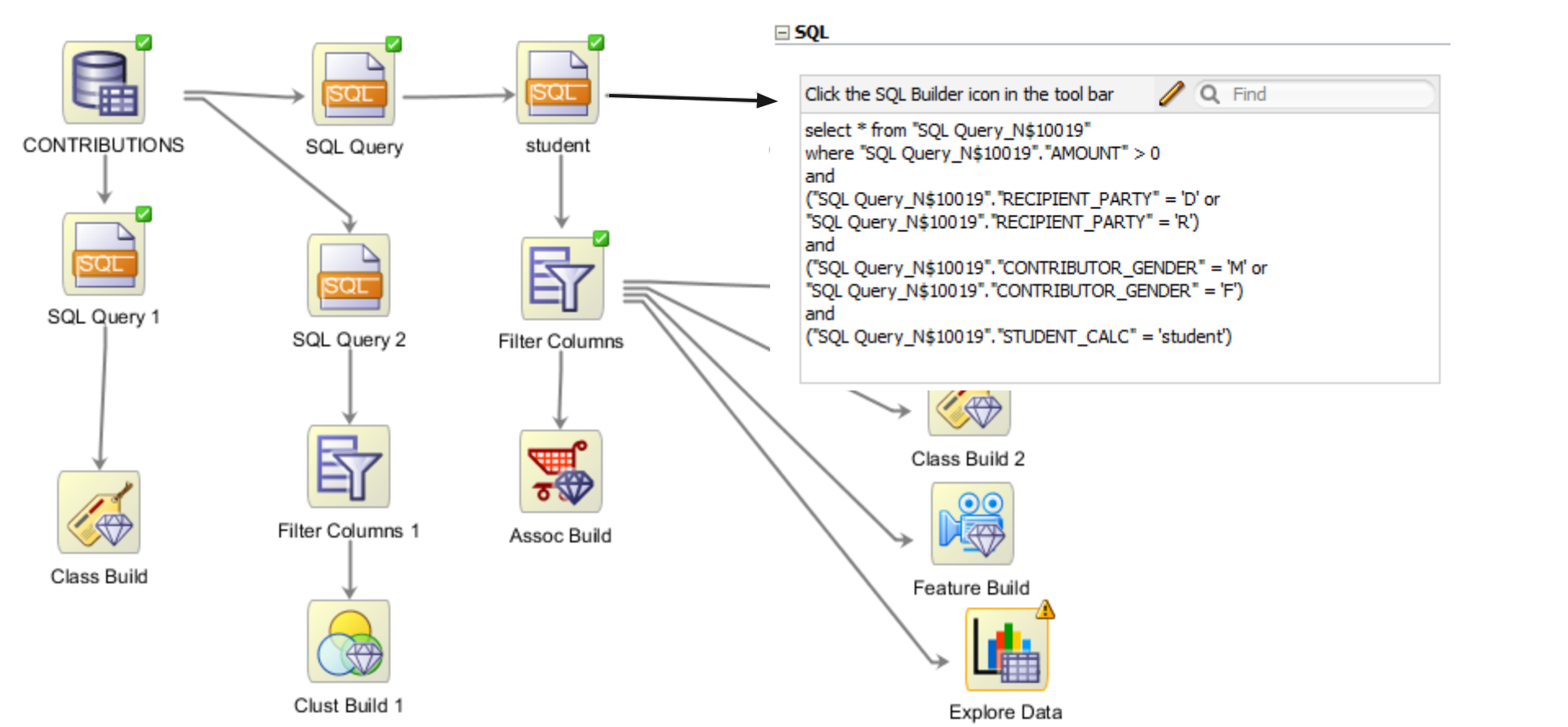
Oracle SQL Dev. Workflow

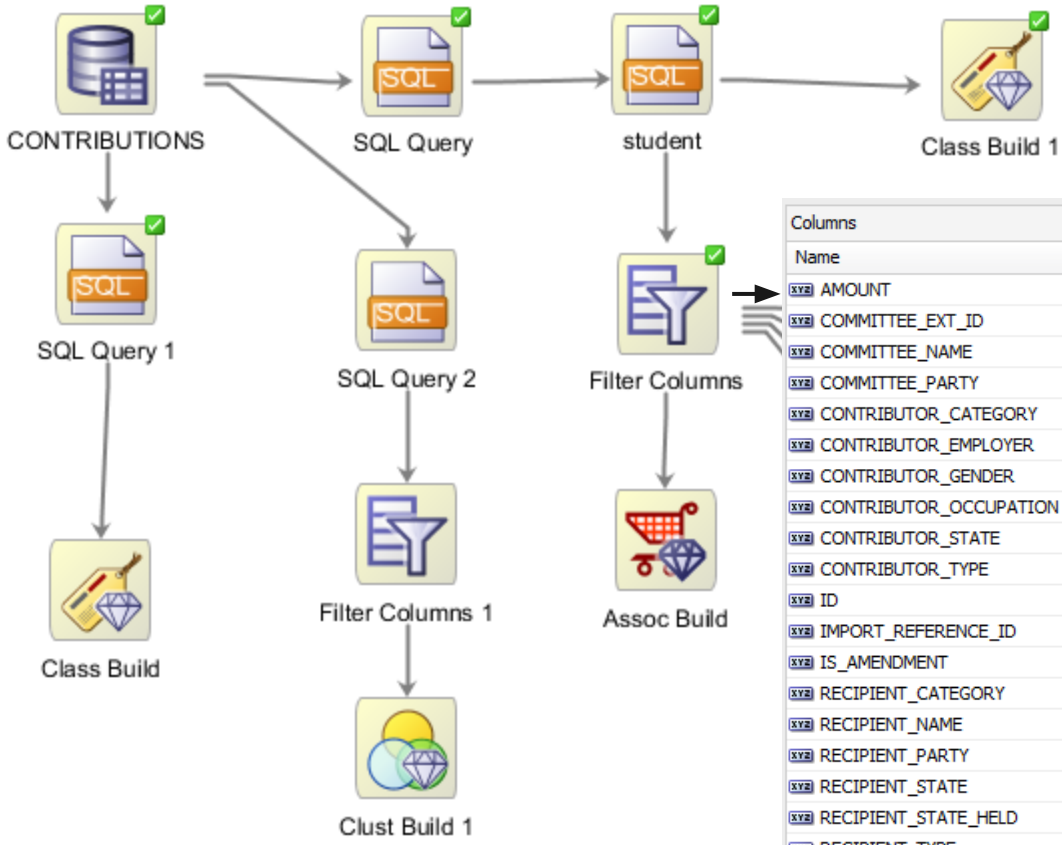





CONTRIBUTIONS
SQL Query
student
Class Build 1
SQL Query 1
SQL Query 2
Filter Columns
Clust Build
Class Build 2
Class Build
Filter Columns 1
Assoc Build
Feature Build
Clust Build 1
Explore Data


SQL
Click the SQL Builder icon in the tool bar
Find
select a.*,
case
when a."CONTRIBUTOR_OCCUPATION" = 'Student' then 'student'
when a."CONTRIBUTOR_OCCUPATION" = 'STUDENT' then 'student'
else 'non-student'
end student_calc
from "CONTRIBUTIONS_N$10008" a
CONTRIBUTIONS
SQL Query
SQL Query 1
SQL Query 2
Class Build
Filter Columns 1
Clust Build 1
Assoc Build
Class Build 2
Feature Build
Explore Data

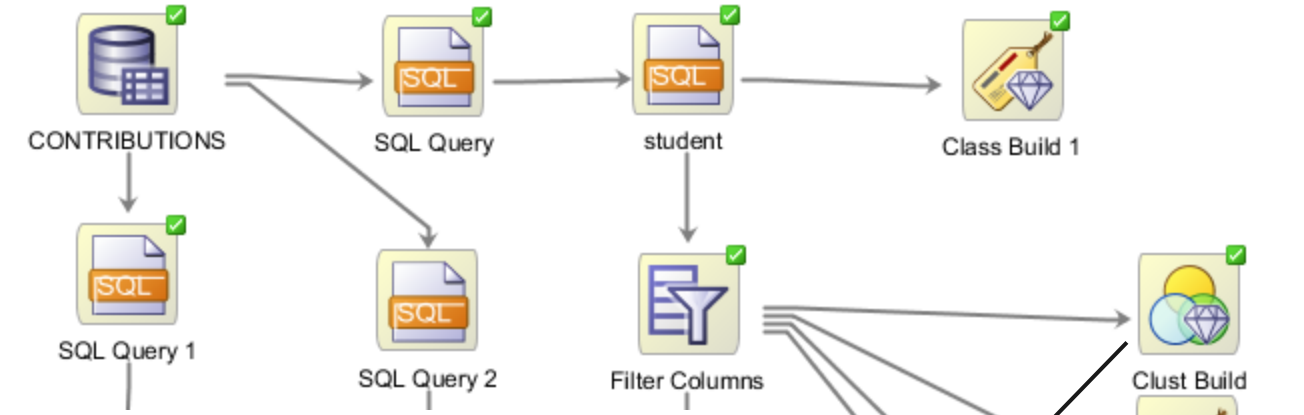

CONTRIBUTIONS
SQL Query
student
SQL Query 1
SQL Query 2
Filter Columns
Class Build
Filter Columns 1
Assoc Build
Clust Build 1
Class Build 2
Feature Build
Explore Data
SQL
Click the SQL Builder icon in the tool bar
Find
select * from "SQL Query_N$10019"
where "SQL Query_N$10019"."AMOUNT" > 0
and
("SQL Query_N$10019"."RECIPIENT_PARTY" = 'D' or
"SQL Query_N$10019"."RECIPIENT_PARTY" = 'R')
and
("SQL Query_N$10019"."CONTRIBUTOR_GENDER" = 'M' or
"SQL Query_N$10019"."CONTRIBUTOR_GENDER" = 'F')
and
("SQL Query_N$10019"."STUDENT_CALC" = 'student')



Columns

Name

Name	Type	Output	Hints
AMOUNT	VARCHAR2		
COMMITTEE_EXT_ID	VARCHAR2		Attribute passed filters
COMMITTEE_NAME	VARCHAR2		Attribute passed filters
COMMITTEE_PARTY	VARCHAR2		Attribute passed filters
CONTRIBUTOR_CATEGORY	VARCHAR2		
CONTRIBUTOR_EMPLOYER	VARCHAR2		Attribute passed filters
CONTRIBUTOR_GENDER	VARCHAR2		
CONTRIBUTOR_OCCUPATION	VARCHAR2		
CONTRIBUTOR_STATE	VARCHAR2		
CONTRIBUTOR_TYPE	VARCHAR2		Exceed % constant
ID	VARCHAR2		Exceed % unique
IMPORT_REFERENCE_ID	VARCHAR2		Exceed % constant
IS_AMENDMENT	VARCHAR2		Exceed % constant
RECIPIENT_CATEGORY	VARCHAR2		Attribute passed filters
RECIPIENT_NAME	VARCHAR2		
RECIPIENT_PARTY	VARCHAR2		
RECIPIENT_STATE	VARCHAR2		
RECIPIENT_STATE_HELD	VARCHAR2		Attribute passed filters
RECIPIENT_TYPE	VARCHAR2		Attribute passed filters
SEAT	VARCHAR2		Attribute passed filters
SEAT_HELD	VARCHAR2		Attribute passed filters
SEAT_RESULT	VARCHAR2		Exceed % constant
SEAT_STATUS	VARCHAR2		Attribute passed filters
STUDENT_CALC	VARCHAR2		Exceed % constant
TRANSACTION_TYPE	VARCHAR2		Attribute passed filters

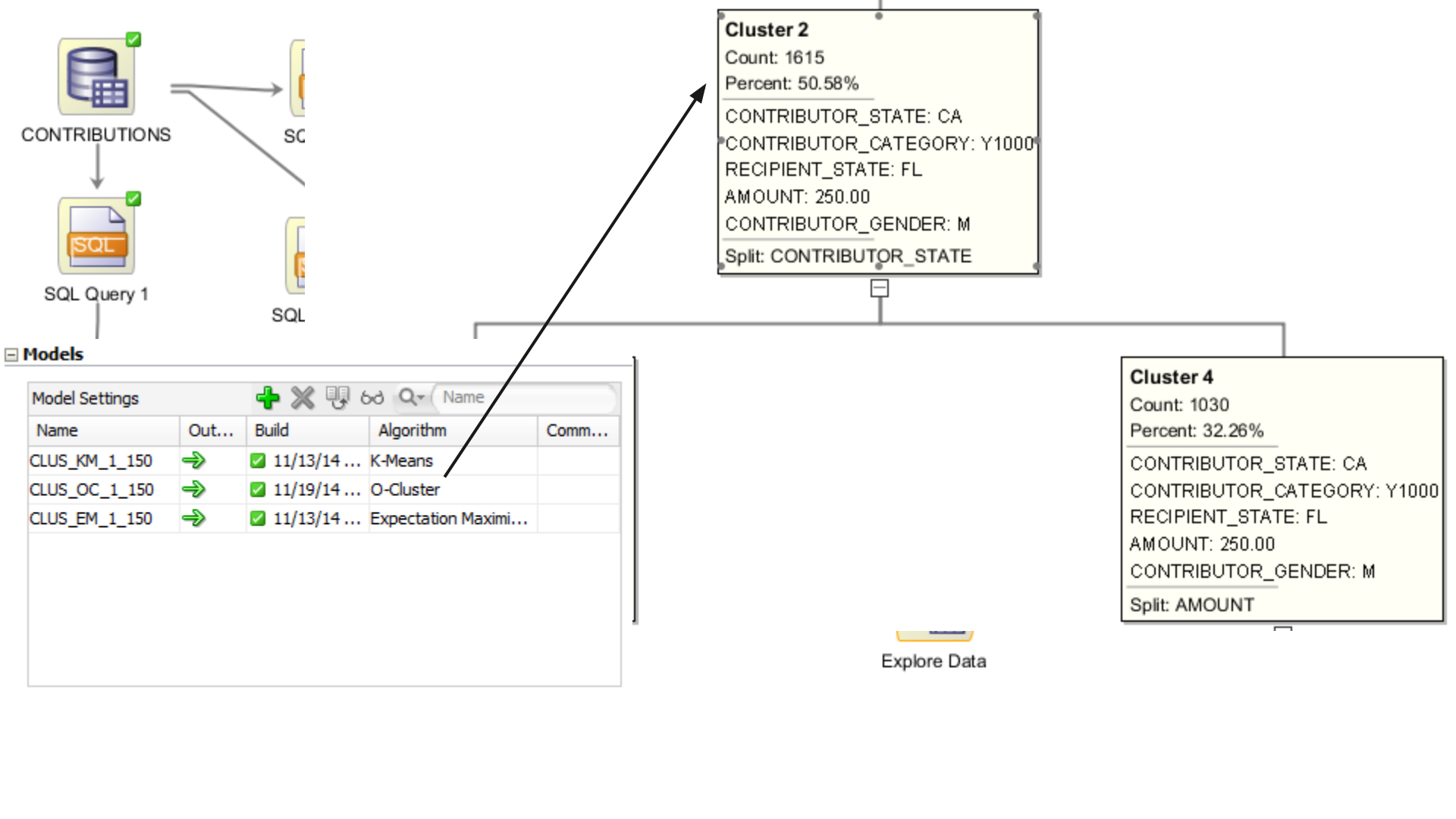


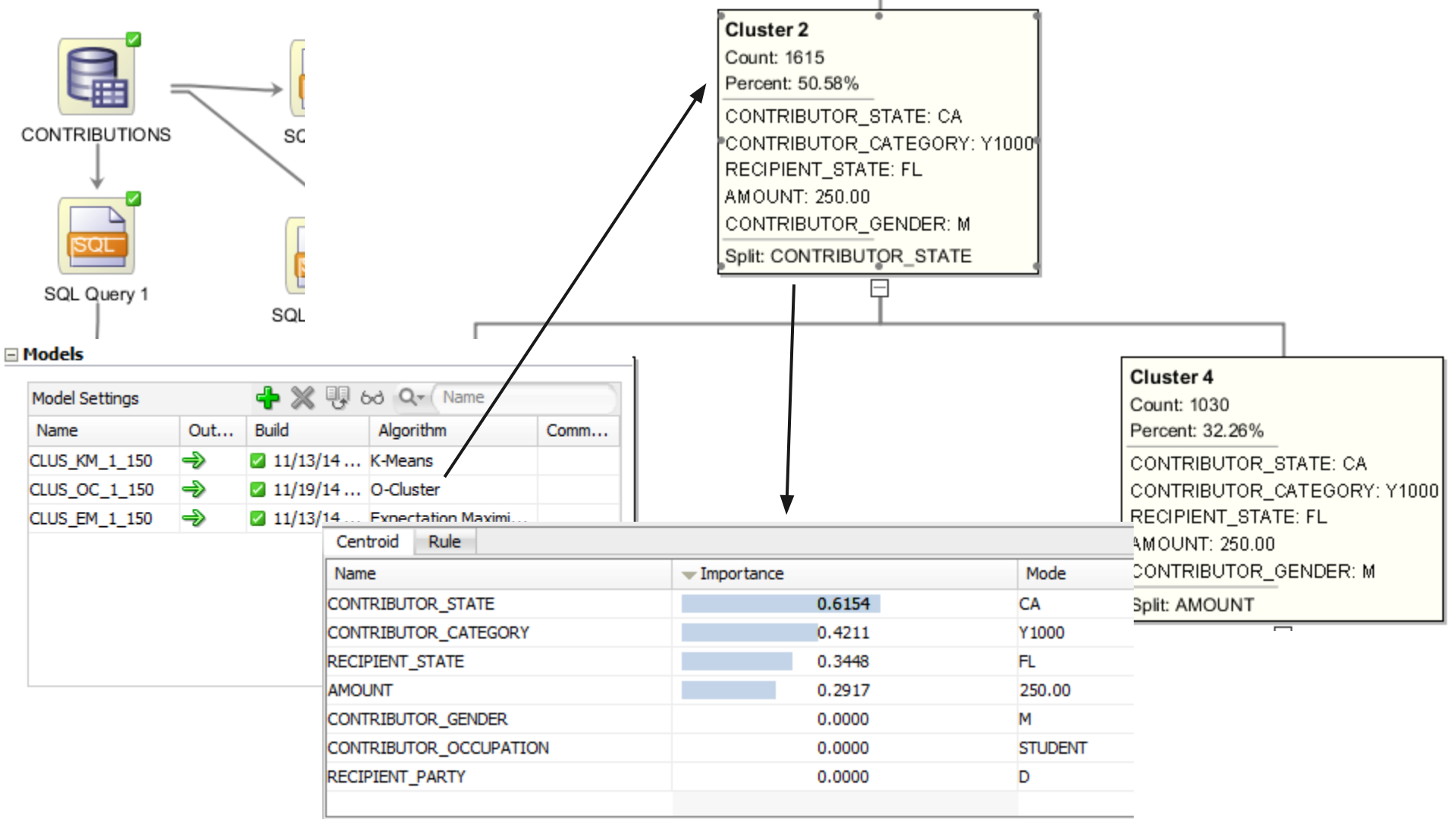
Models

Model Settings

Name

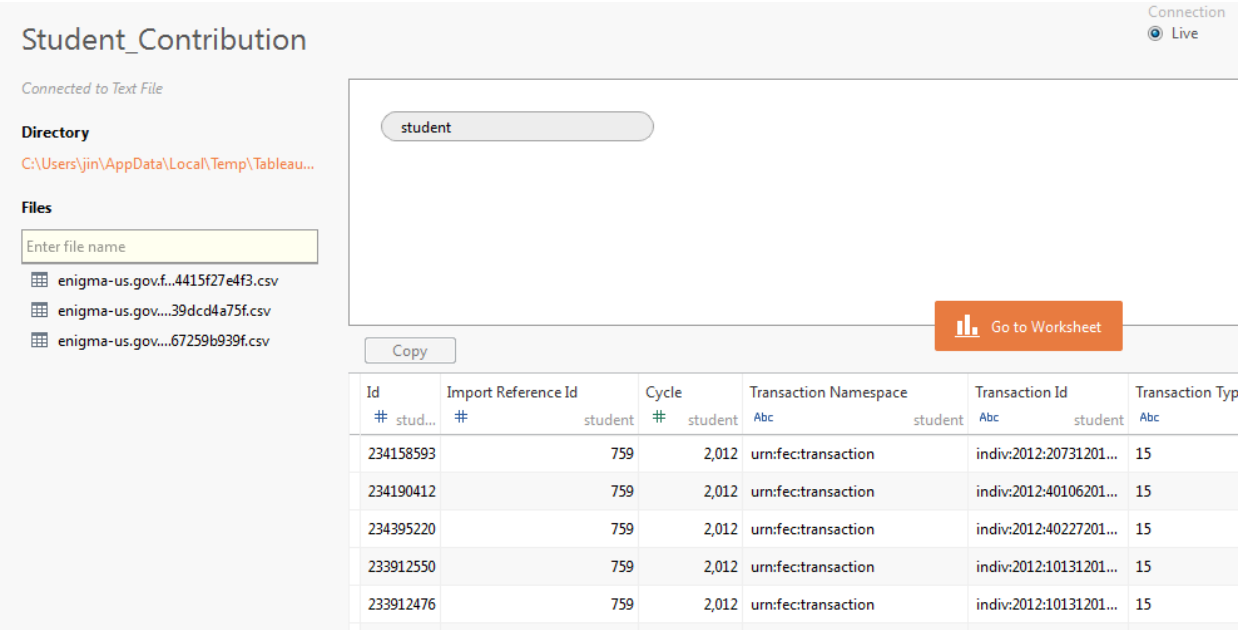
Name	Out...	Build	Algorithm	Comm...
CLUS_KM_1_150		11/13/14 ...	K-Means	
CLUS_OC_1_150		11/19/14 ...	O-Cluster	
CLUS_EM_1_150		11/13/14 ...	Expectation Maximi...	

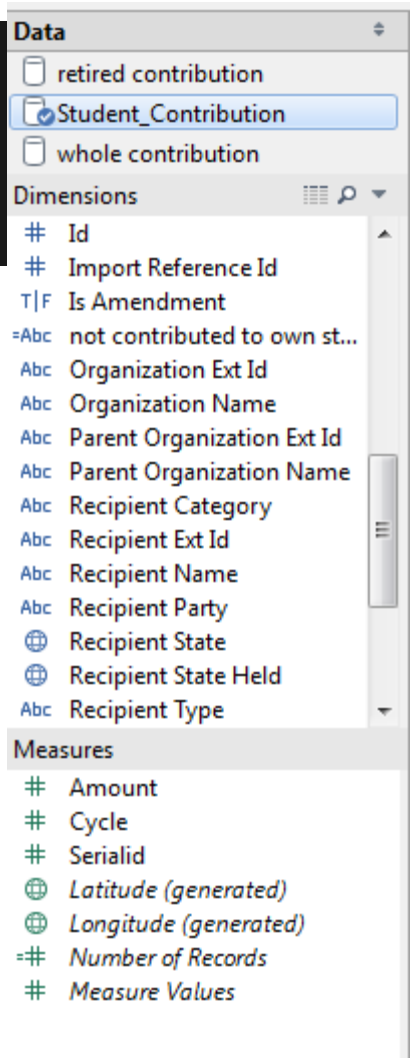

CONTRIBUTIONS
SQL Query 1
Models
Model Settings
Name
Name
Out...
Build
Algorithm
Comm...
CLUS_KM_1_150
11/13/14 ...
K-Means
CLUS_OC_1_150
11/19/14 ...
O-Cluster
CLUS_EM_1_150
11/13/14 ...
Expectation Maximi...
Cluster 2
Count: 1615
Percent: 50.58%
CONTRIBUTOR_STATE: CA
CONTRIBUTOR_CATEGORY: Y1000
RECIPIENT_STATE: FL
AMOUNT: 250.00
CONTRIBUTOR_GENDER: M
Split: CONTRIBUTOR_STATE
Cluster 4
Count: 1030
Percent: 32.26%
CONTRIBUTOR_STATE: CA
CONTRIBUTOR_CATEGORY: Y1000
RECIPIENT_STATE: FL
AMOUNT: 250.00
CONTRIBUTOR_GENDER: M
Split: AMOUNT
Explore Data


CONTRIBUTIONS
SQL Query 1
Models
Model Settings
Name
Name
Out...
Build
Algorithm
Comm...
CLUS_KM_1_150
11/13/14 ...
K-Means
CLUS_OC_1_150
11/19/14 ...
O-Cluster
CLUS_EM_1_150
Cluster 2
Count: 1615
Percent: 50.58%
CONTRIBUTOR_STATE: CA
CONTRIBUTOR_CATEGORY: Y1000
RECIPIENT_STATE: FL
AMOUNT: 250.00
CONTRIBUTOR_GENDER: M
Split: CONTRIBUTOR_STATE
Cluster 4
Count: 1030
Percent: 32.26%
CONTRIBUTOR_STATE: CA
CONTRIBUTOR_CATEGORY: Y1000
RECIPIENT_STATE: FL
AMOUNT: 250.00
CONTRIBUTOR_GENDER: M
Split: AMOUNT
Centroid
Rule
Name
Importance
Mode
CONTRIBUTOR_STATE
0.6154
CA
CONTRIBUTOR_CATEGORY
0.4211
Y1000
RECIPIENT_STATE
0.3448
FL
AMOUNT
0.2917
250.00
CONTRIBUTOR_GENDER
0.0000
M
CONTRIBUTOR_OCCUPATION
0.0000
STUDENT
RECIPIENT_PARTY
0.0000
D

Tableau

Further analysis





Pages

Columns: Contributor State | Recipient State

Rows: SUM(Amount)

Filters

- Contributor State: CA
- Recipient State

Marks

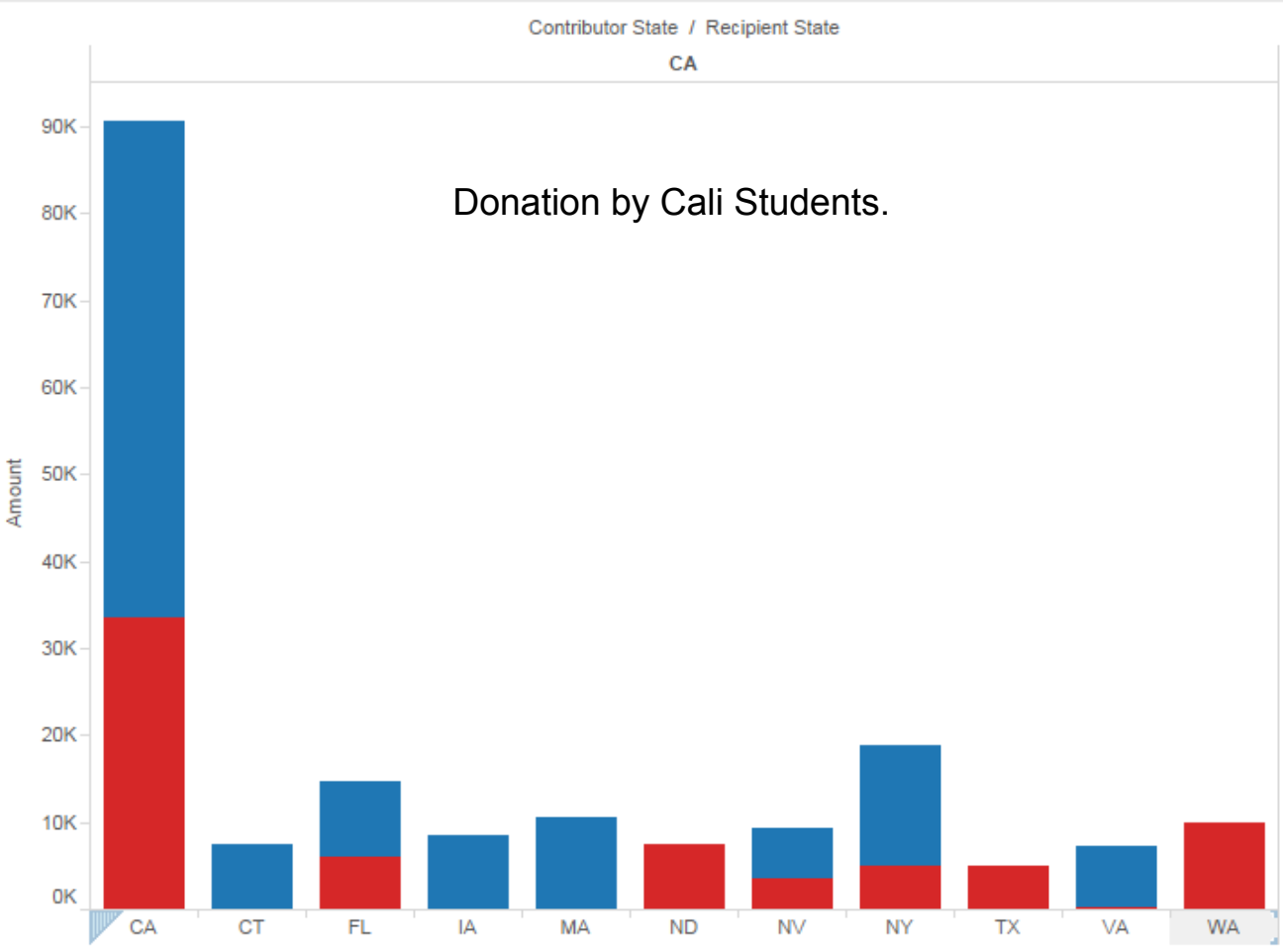
Automatic

Color | Size | Label | Detail | Tooltip

Recipient Party

Recipient Party

- D
- R



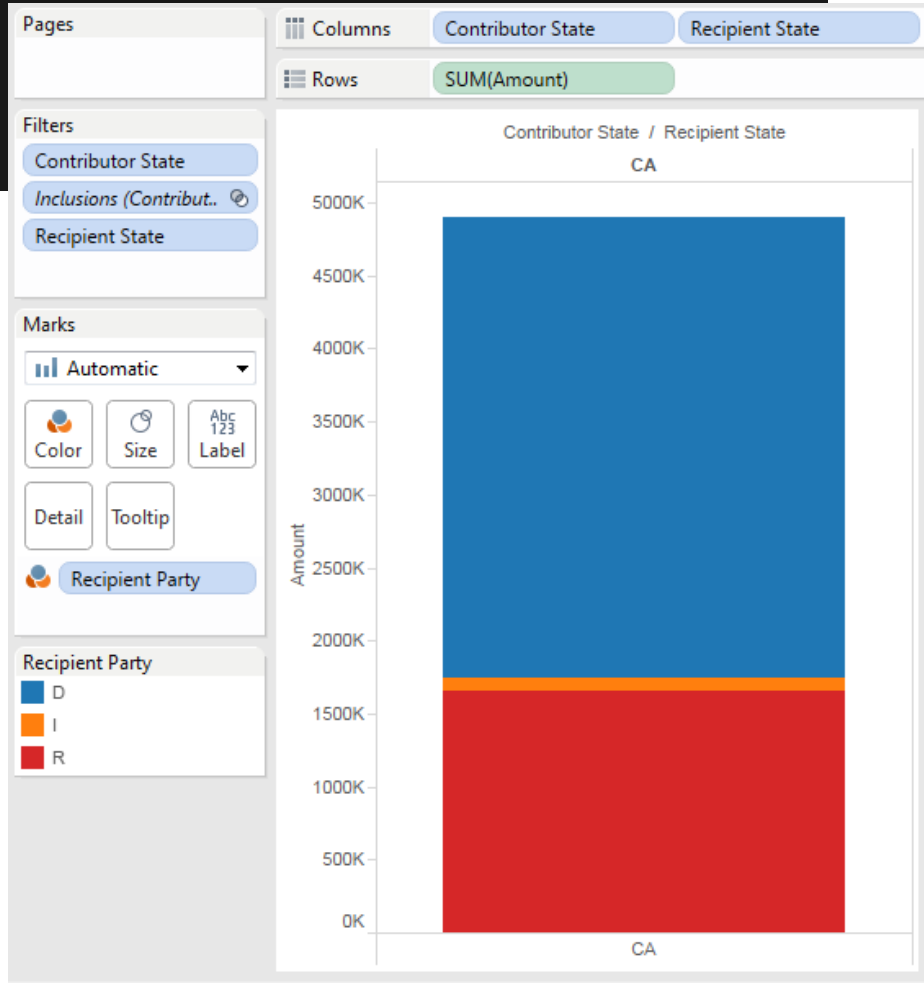
Is donating to other state common?

No.

contains(“retired”, Contributor.Occupation)

(only targeted Cali)

did not contribute ANY money out of Cali.



Calculated Field [not contributed to own state]

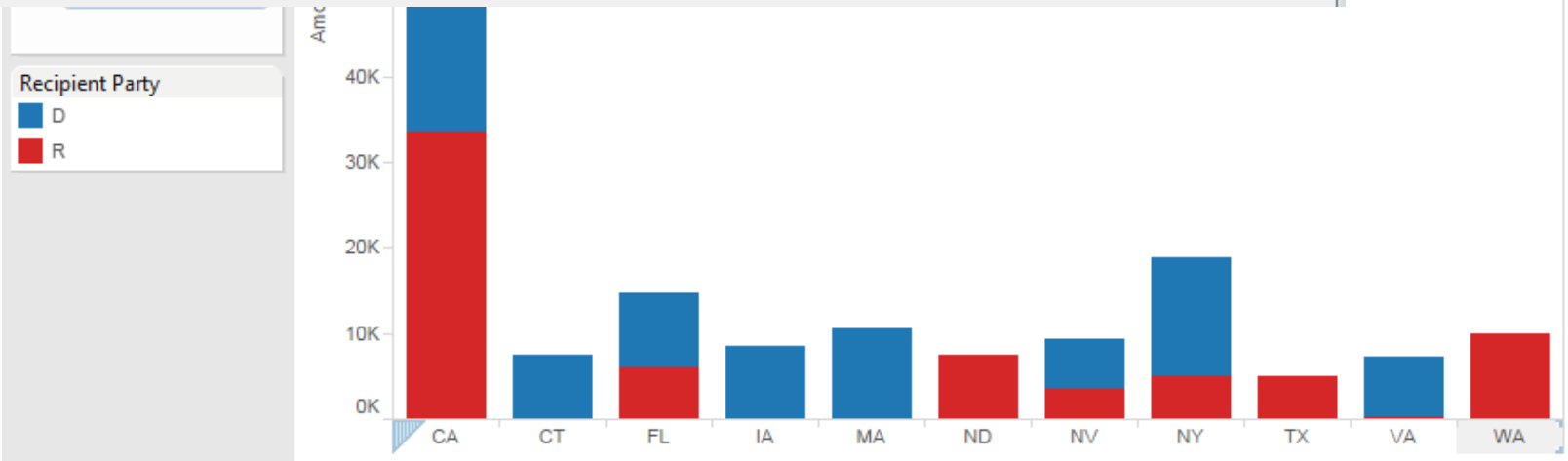
Name: not contributed to own state

Formula:

```
IF ([Recipient State] = [Contributor State]) THEN "ignore"
ELSE [Recipient State]
END
```

The calculation is valid.

Clear



Calculated Field [not contributed to own state]

Name: not contributed to own state

Formula:

```
IF ([Recipient State] = [Contribut
ELSE [Recipient State]
END
```

The calculation is valid.

Pages

Filters

not contributed to o..

Marks

Automatic

Color | Size | Label | Detail | Tooltip

Recipient Party

Recipient Party

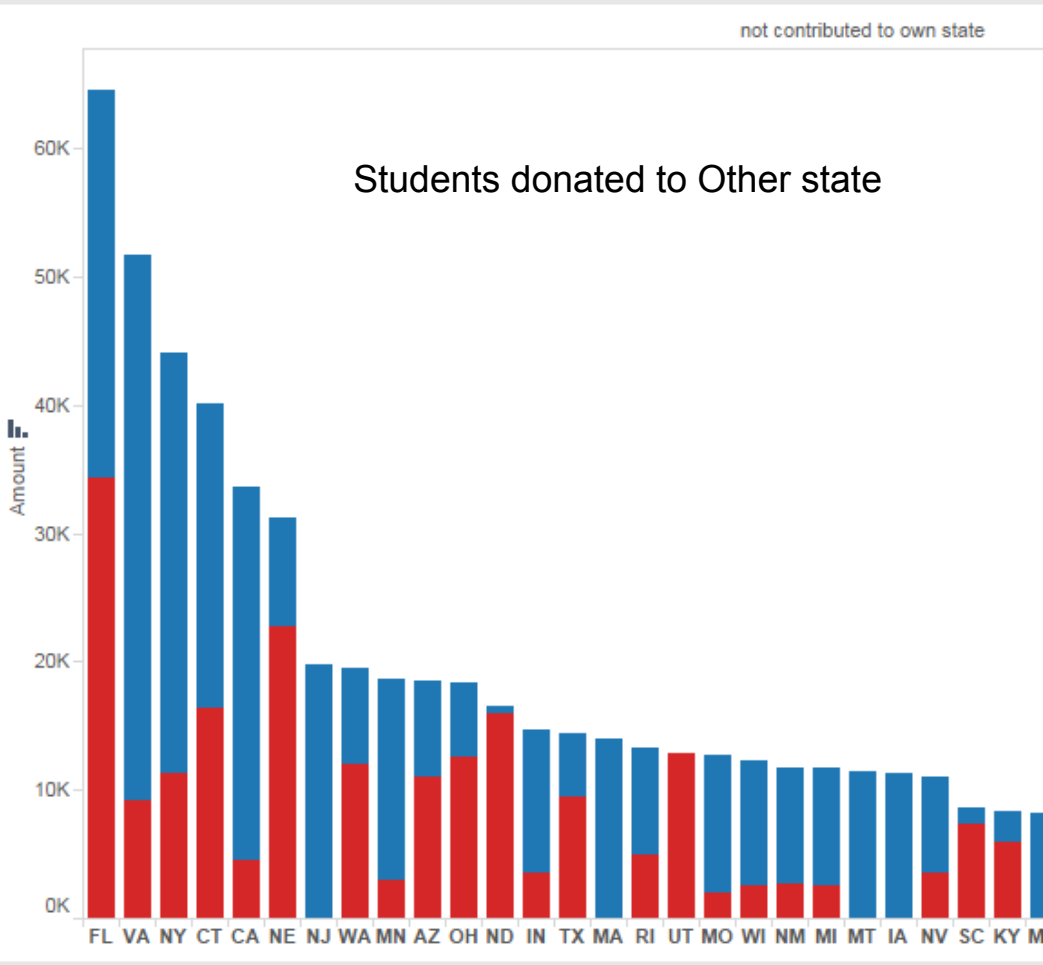
D

I

R

Columns: not contributed to o..

Rows: SUM(Amount)



Calculated Field [not contributed to own state]

Name: not contributed to own state

Formula:

```
IF ([Recipient State] = [Contribut
ELSE [Recipient State]
END
```

Pages

Filters

not contributed to o..

Marks

Automatic

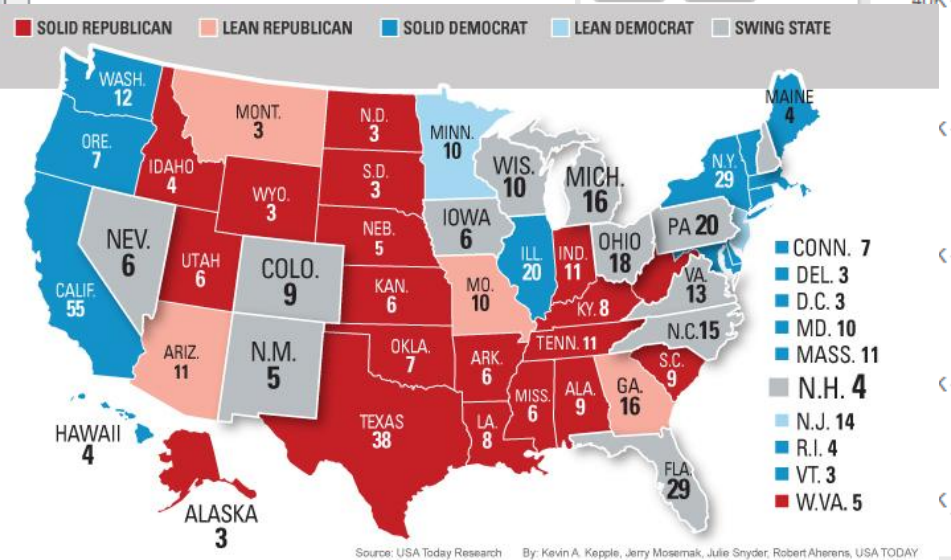
Color | Size | Label | Detail | Tooltip

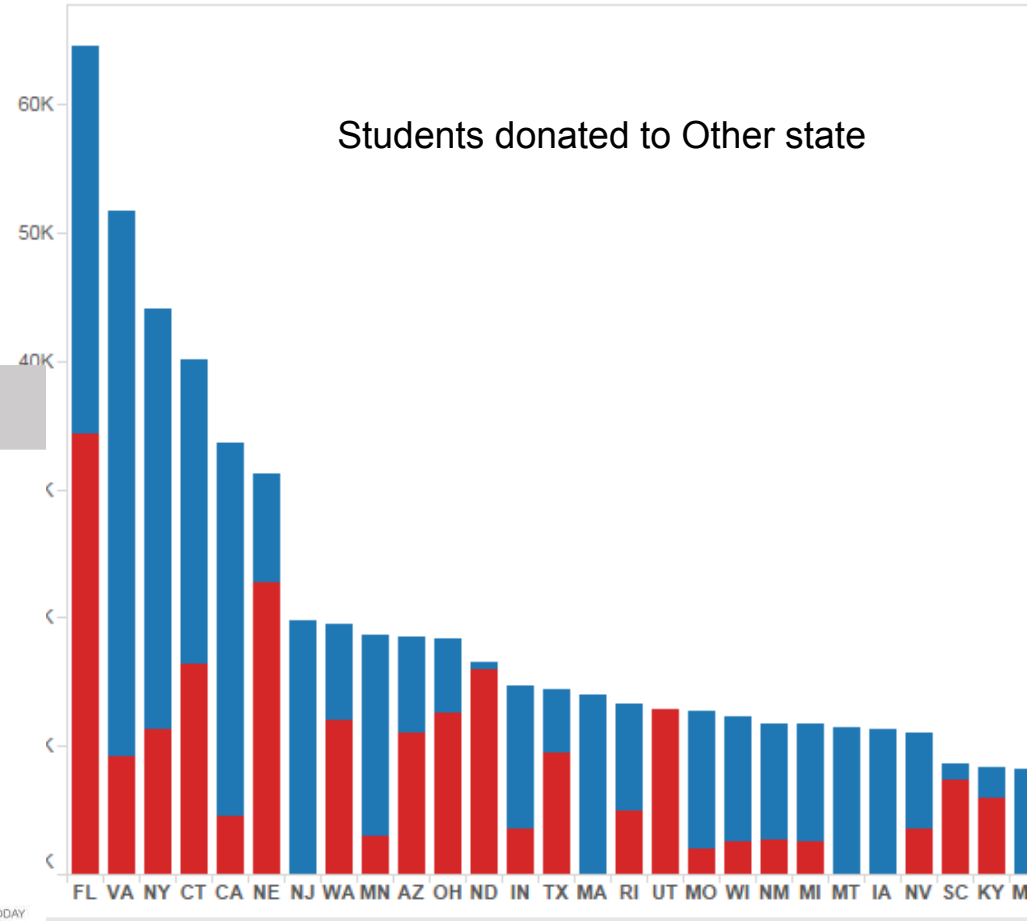
Columns: not contributed to o..

Rows: SUM(Amount)

not contributed to own state

Students donated to Other state





Calculated Field [not contributed to own state]

Name: not contributed to own state

Formula:

```
IF ([Recipient State] = [Contribut
ELSE [Recipient State]
END
```

Pages

Filters

not contributed to o..

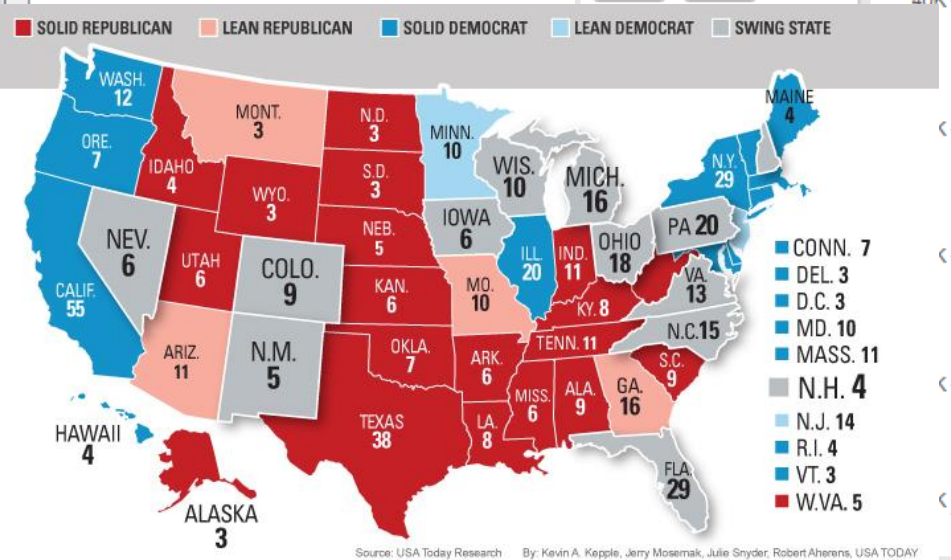
Marks

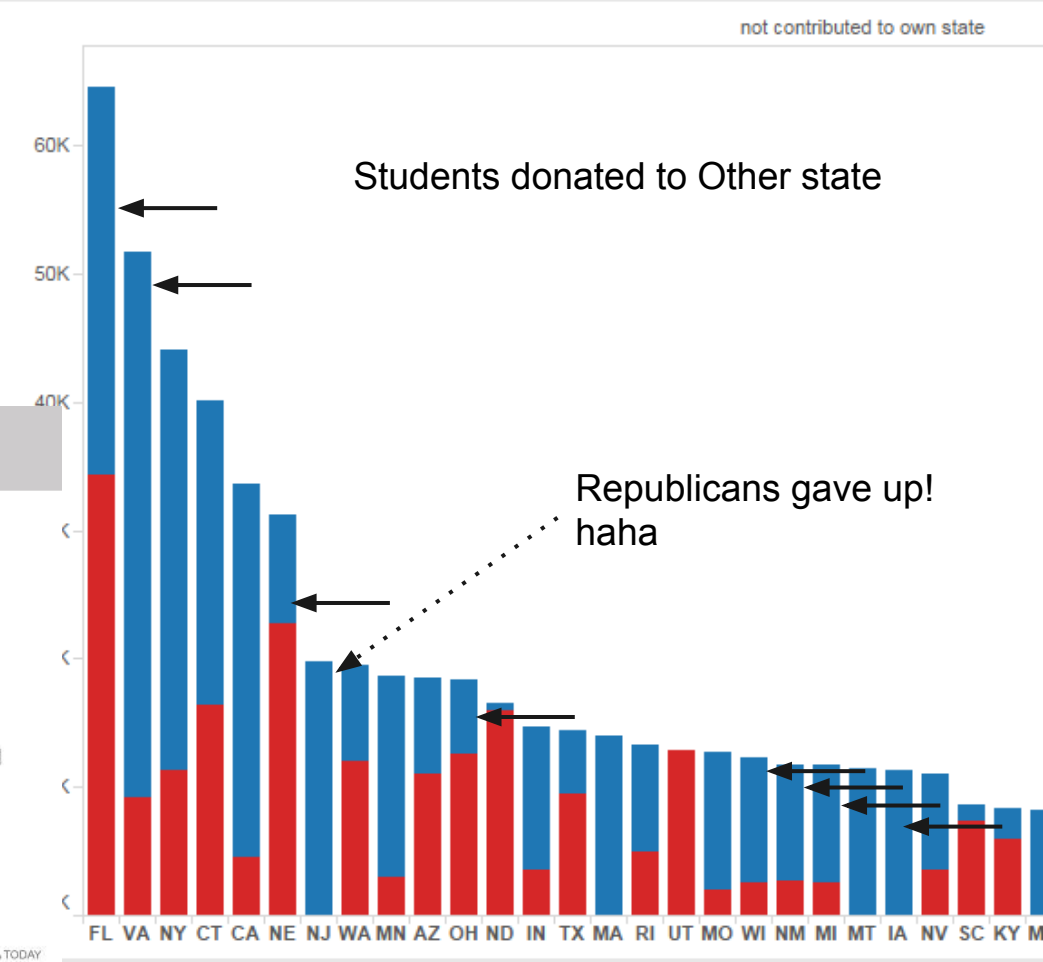
Automatic

Color | Size | Label | Detail | Tooltip

Columns: not contributed to o..

Rows: SUM(Amount)





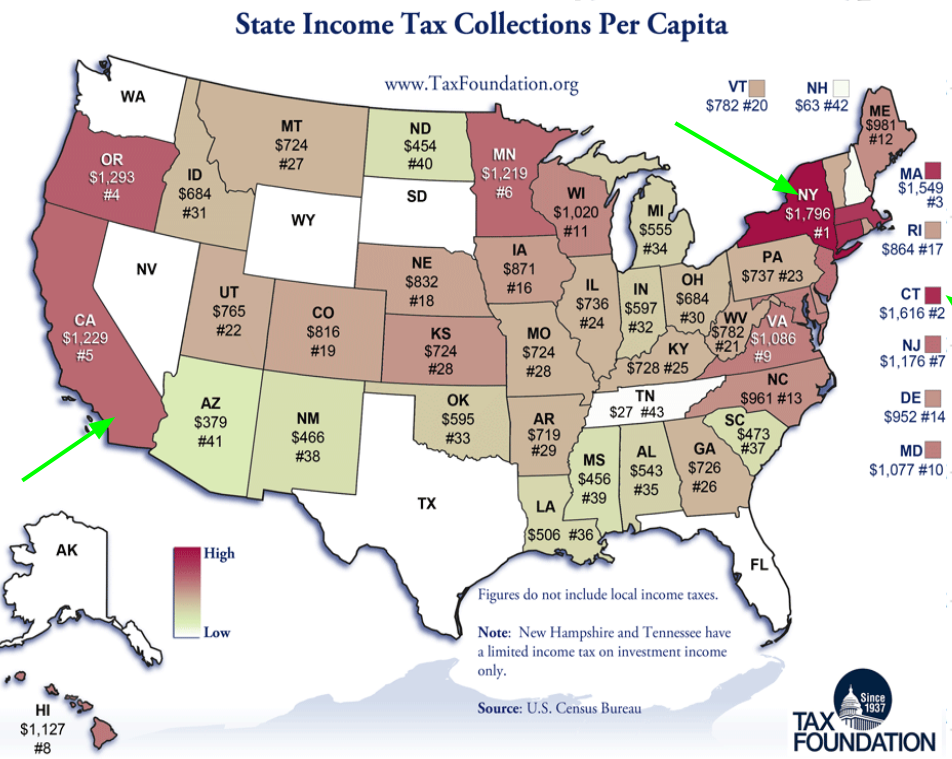
Pages

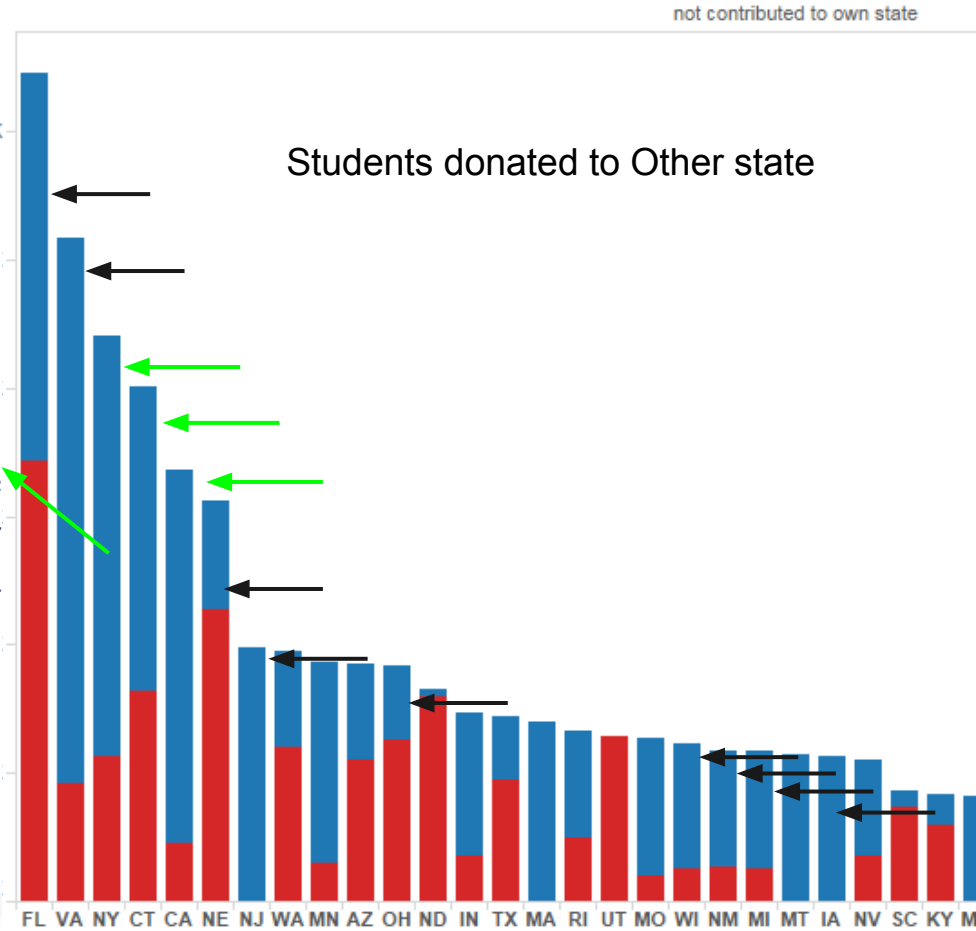
Columns: not contributed to o..

Rows: SUM(Amount)

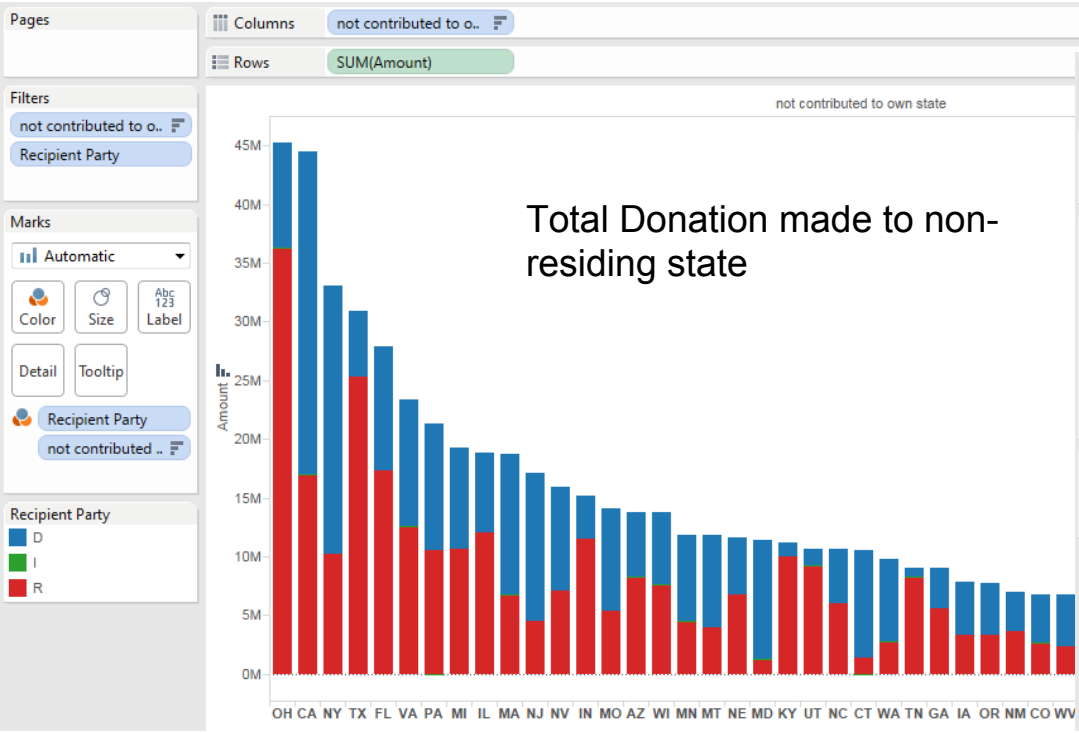
Filters: not contributed to o..

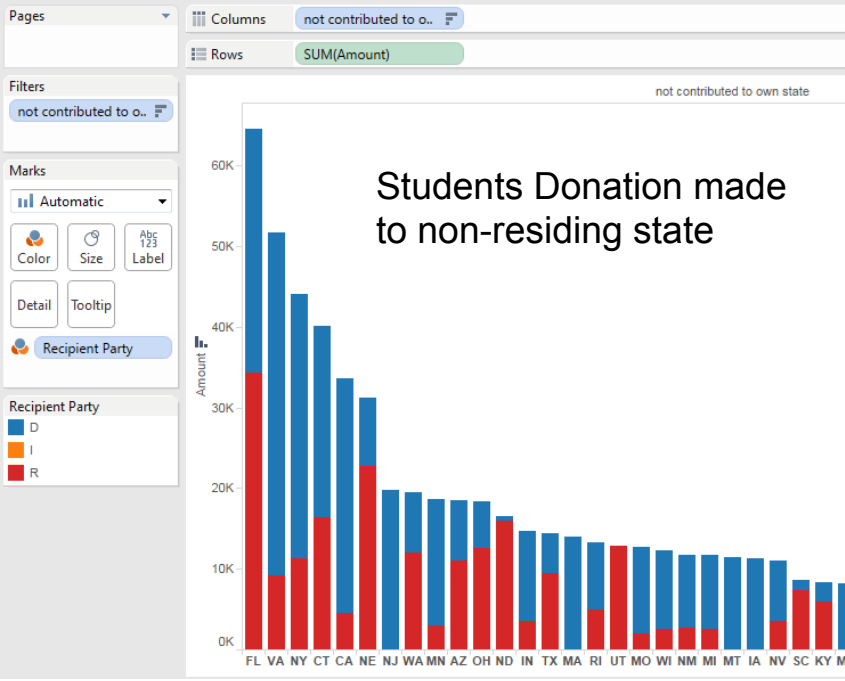
Marks



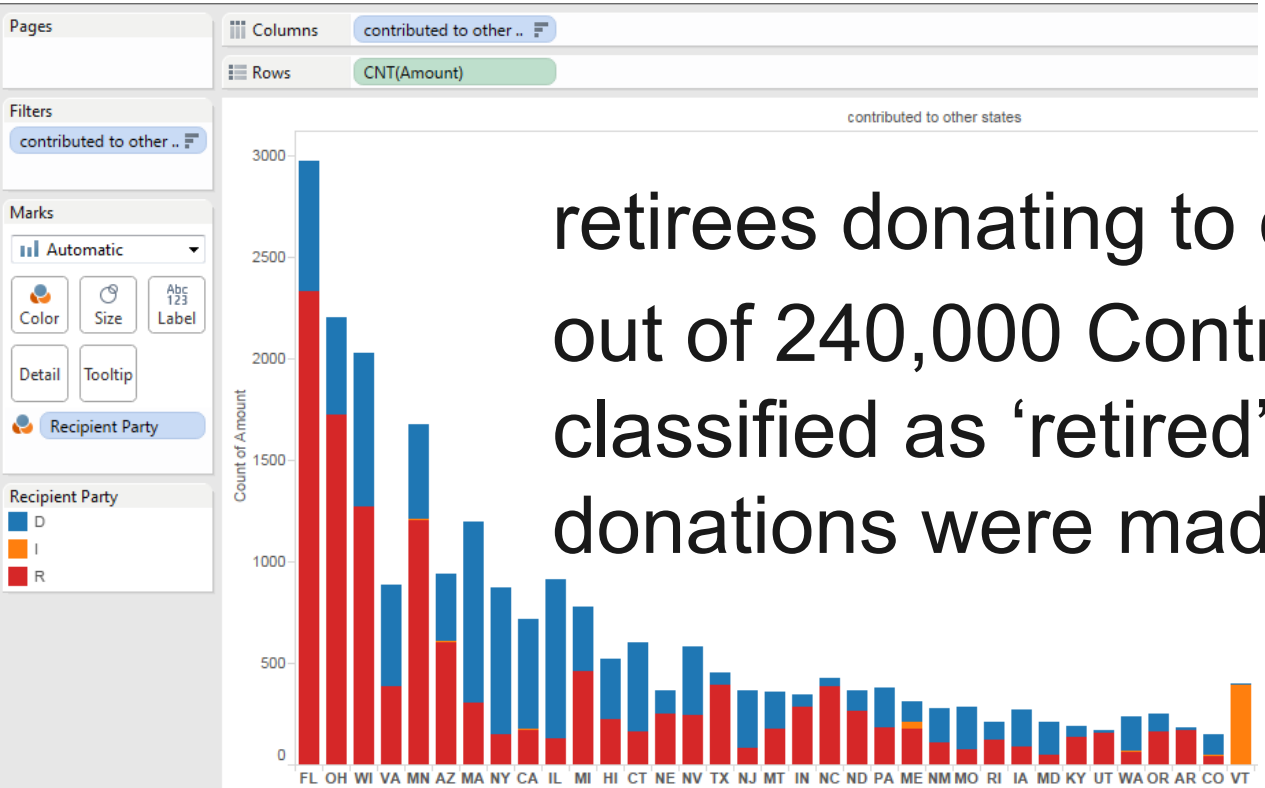


Total Donated to Other State





More interesting things

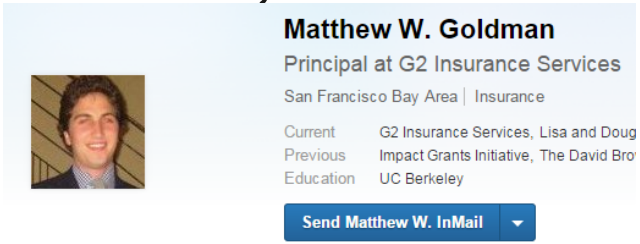


retirees donating to other states

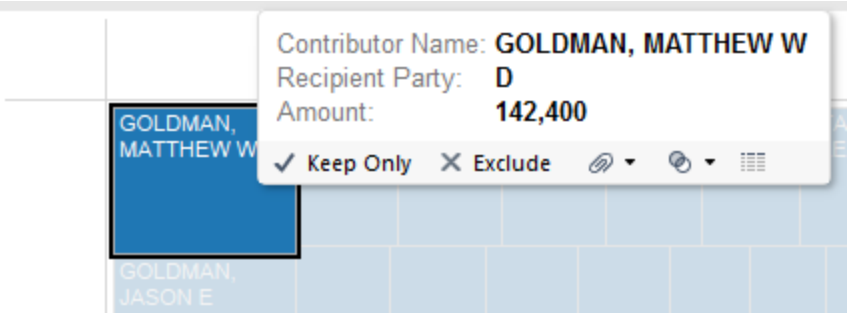
out of 240,000 Contributors classified as ‘retired’, only 24,314 donations were made to out of own states

cont.

- John Ramsey(student) from Austin, TX contributed 1.91M to Super PAC



- Matthew W. Goldman contributed the most to Democrat officially.



Conclusion

- Clustering algorithms can show many things that you didn’t think of at first.
- Although there may be more factors that decide contribution amount, donation to swing states has proved to be a strong factor.
- In California, retirees choose to completely keep campaign contributions inside their own state, while students choose to also donate significant amounts to states other than California