Infovis Project - College Students Migration

Data Source

Contest Challenge: Perceived vs. Actual Student Interest http://vacommunity.org/ieeevpg/viscontest/2015/

Data Attributes

ColumnID	ColumnName	ColumnDescription	Sample Values
1	Gender	Gender of the examinees	M/F
2	Actcat	ACT Composite Score	1-36
3	T1_Level2	Level 2 Major Category (Planned - High School)	Agriculture (18 Categories)
4	T2_Level2	Level 2 Major Category (Declared - First Year)	Agriculture (18 Categories)
5	T3_Level2	Level 2 Major Category (Declared - Second Year)	Agriculture (18 Categories)
6	T1_IMFIT	Interest Major Fit to Level 0 Major (Planned - High School)	Good, Moderate, Poor
7	T2_IMFIT	Interest Major Fit to Level 0 Major (Declared - First Year)	Good, Moderate, Poor
8	T3_IMFIT	Interest Major Fit to Level 0 Major (Declared - Second Year)	Good, Moderate, Poor
9	YR1	College Type Attended (First Year)	2-year/4-year
10	YR2	College Type Attended (First Year)	2-year/4-year
11	Transfer	Flag indicating if student transferred schools between the first and second year	0/1
12	HighestLevel2	Level 2 Major Category associated with best-fitting Level0 Major	Agriculture (18 Categories)
13	Count	Number of students with exactly the same data	1+

http://vacommunity.org/ieeevpg/viscontest/2015//student_flow_aggregated_field_descriptions.pdf#page=3

Description

This visualization shows how the major of interests changes and how the students be fit for different majors.

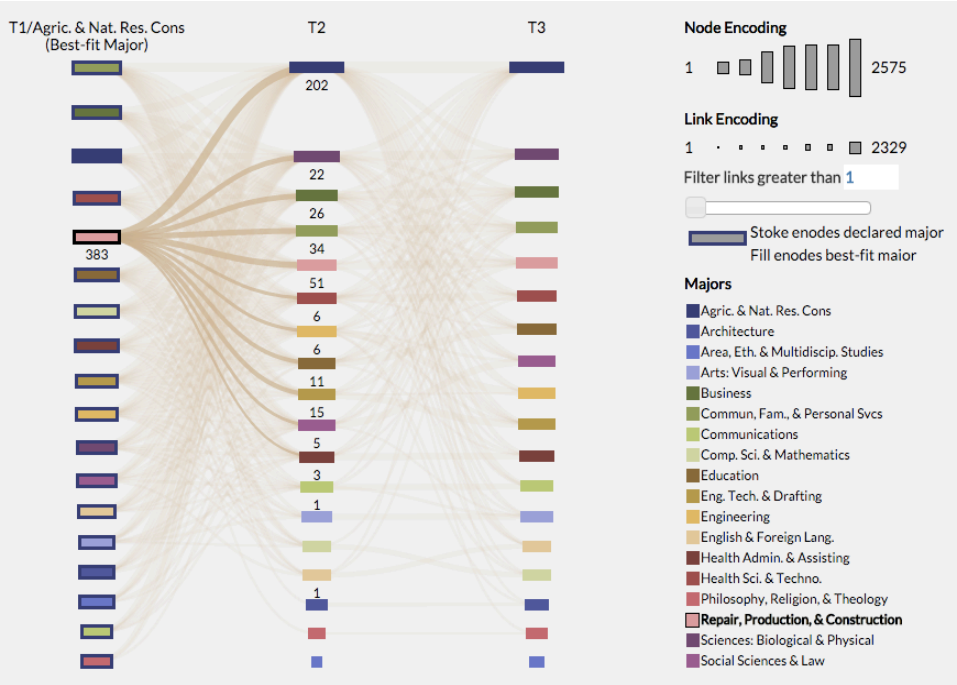
It consists of three graphs:

1. Major Migration Chart: aggregation on major selection in three years (**T1_Level2,T2_Level2,T3_Level2**)
2. Fit Chart: aggregation on the interest level of the declared major in three years (**T1_IMFIT,T2_IMFIT,T3_IMFIT**)
3. Cluster Chart: clustering and aggragation on gender and ACT score of individual student (**Gender,Actcat**)

Interaction

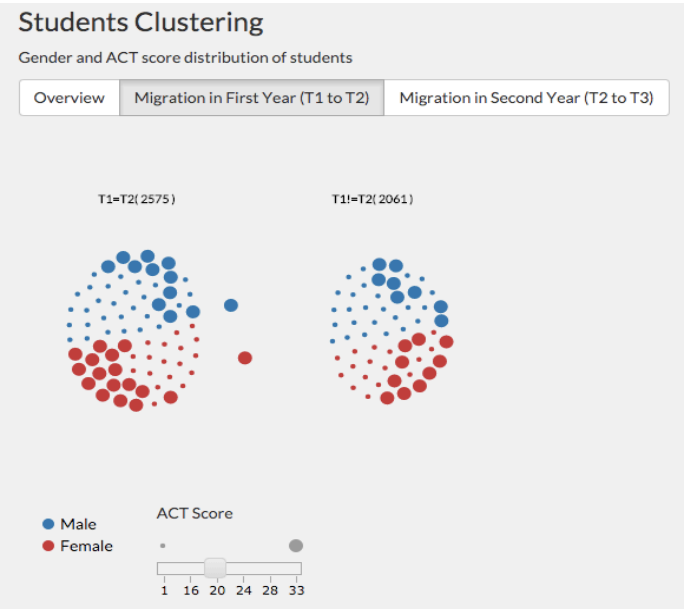
Major Migration Chart:

1. Hover the node(rectangle) to check the number of certain declared major in certain year, also the number of flow-in and flow-out from different majors in previous year and following year.
2. Click on the rectangle to see the detailed selected group student with a best fit major distribution(figure below). If you want to go back, just clicking on the blank canvas in the graph
3. The **Fit Chart** and **Cluster Chart** will be updated dynamically as filtering the selection in **Major Migration Chart**.
4. You can use slider on the side to filter the least number of links(student transfer from one year to next)
5. Hover on the legend to check number of students rankings through three years



Cluster Chart:

1. Toggle button to see the migration status,for example to check how many students change their major between two years(T1!=T2).
2. Slide on the ACT score slider to re-clustering the data based on their ACT scores.



D3 layouts used

1. Sankey Graph http://bost.ocks.org/mike/sankey/

2. Parsets https://github.com/jasondavies/d3-parsets
3. Clustor Force Layout http://bl.ocks.org/mbostock/7882658

Entire Layout