

Data Visualization Final Project

Factors Impacting Long-Term Outcomes in Higher Education

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May 10, 2019



SCHOOL OF INFORMATICS AND COMPUTING

INDIANA UNIVERSITY

Department of Information and Library Science
Bloomington

Long-Term Outcomes in Higher Education

May 10, 2019

Overview

- Data Source and Previous Research
- Choosing a Visualization
- Cleaning the data
- Results
- Areas for Further Research

DATA SOURCE AND PREVIOUS RESEARCH



What Data Are We Using?



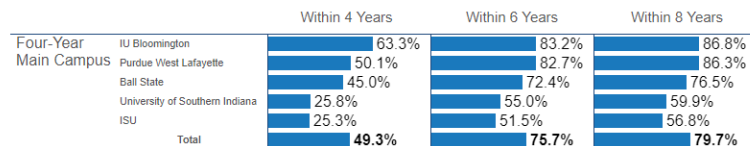
Data Structure

- Student Sample
- Conferred Degree Data
- Location Data
- Academic Program Data



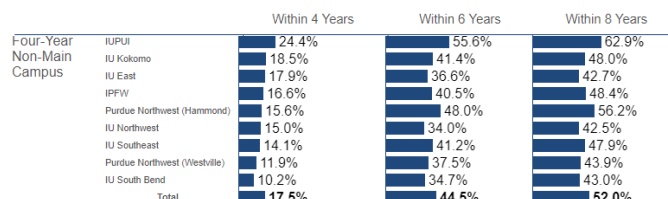
Indiana Commission for Higher Education – Completion Dashboard

Completion at the same campus and degree level



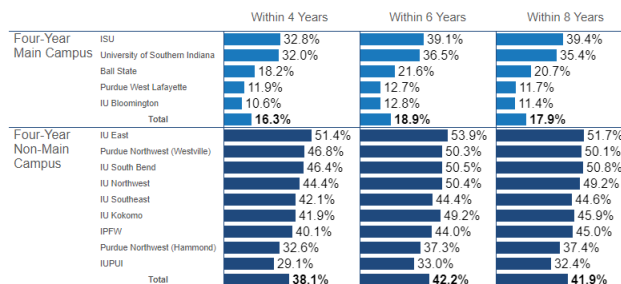
Indiana Commission for Higher Education – Completion Dashboard

Completion at the same campus and degree level



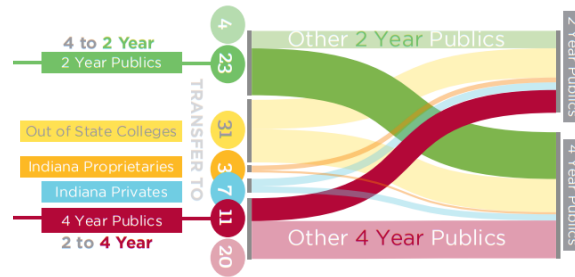
Indiana Commission for Higher Education – Completion Dashboard

Dropped out / no degree



COLLEGE TRANSFER & STUDENT SUCCESS

High level look at transfer students

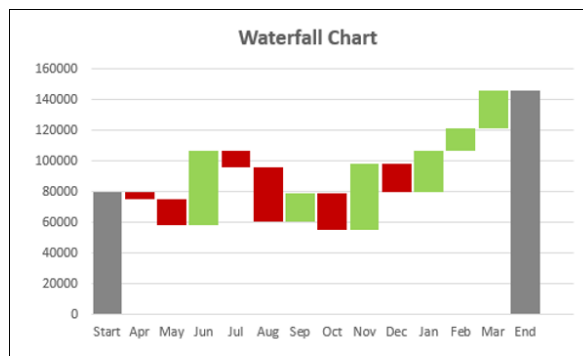


CHOOSING A VISUALIZATION

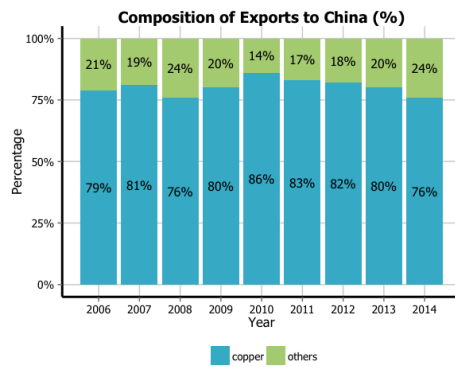
What are we trying to show in the data?

- Flow of students from one group to another
- Trends over time
- Insight about a particular cohort

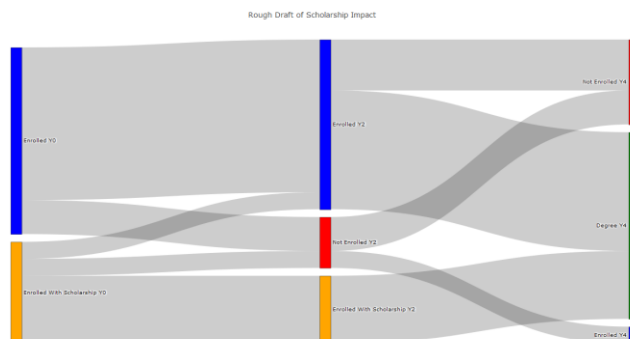
Waterfall Chart?



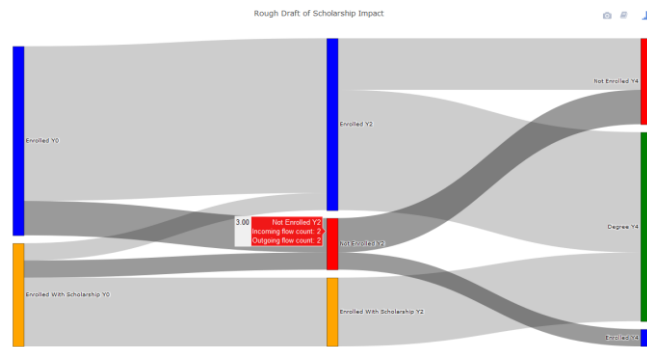
Stacked Bar Chart?



Sankey Diagram?



Sankey Diagram?



CLEANING THE DATA

Fitting the Data to the Visualization

- Majority of time spent cleaning the data

Fitting the Data to the Visualization

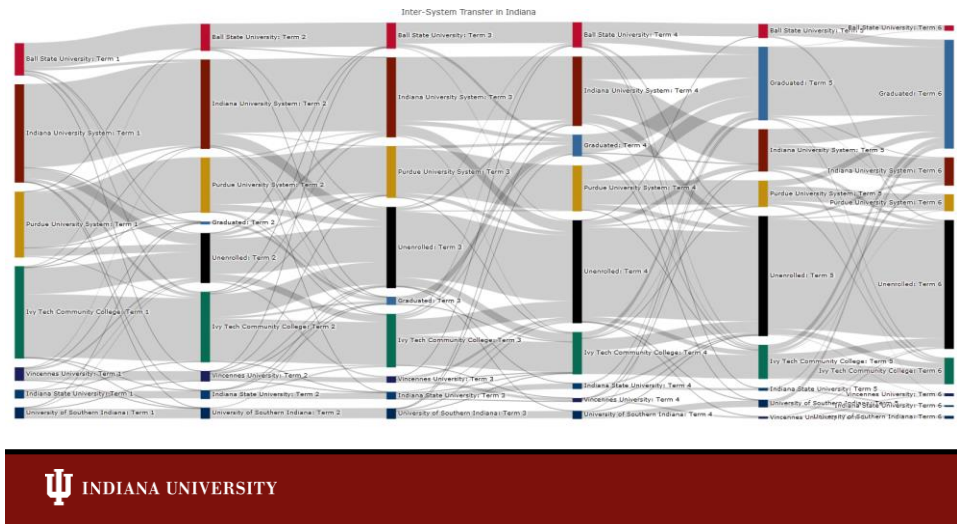
- Majority of time spent cleaning the data
- Working with Plotly module Sankey charts

Fitting the Data to the Visualization

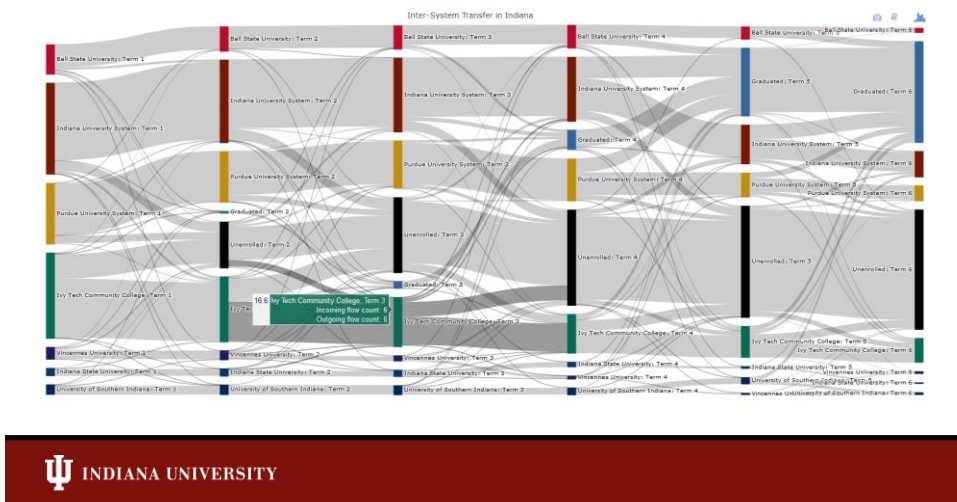
- Majority of time spent cleaning the data
- Working with Plotly module Sankey charts
- Validating and iterating on the results

RESULTS

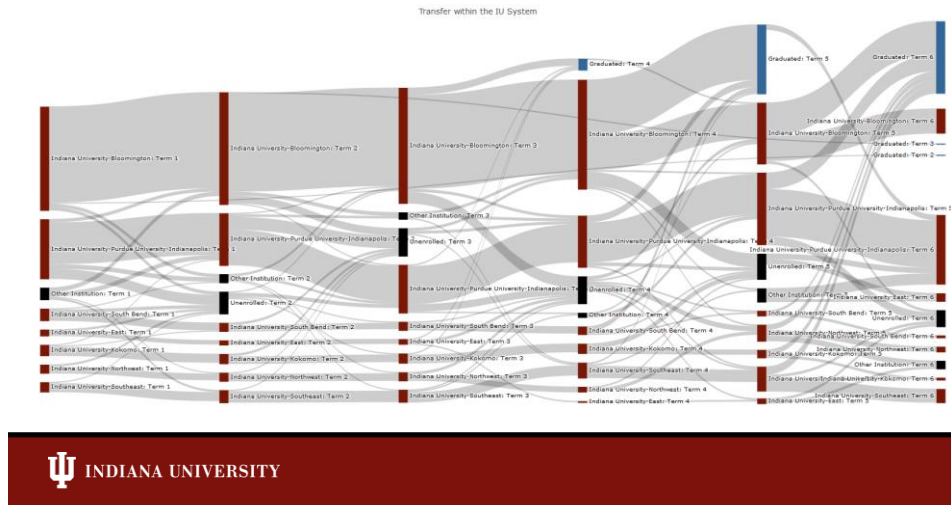
Inter-System Transfer in Indiana



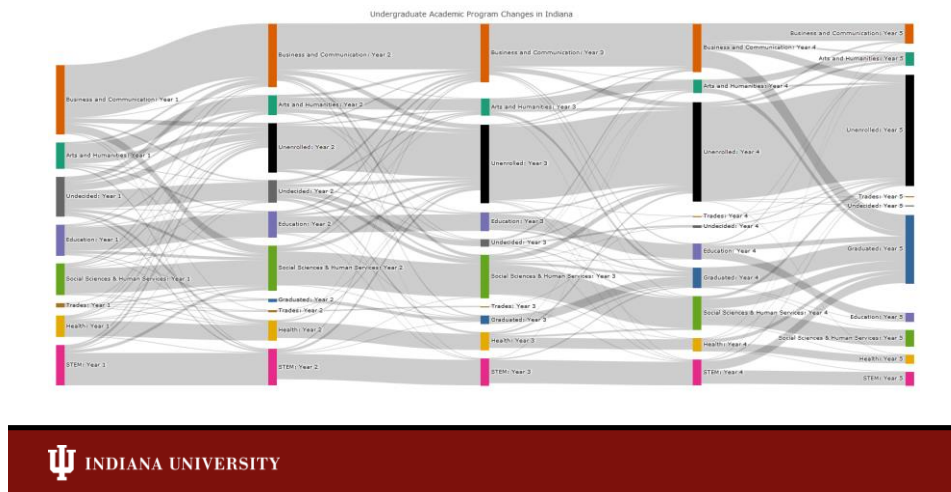
Inter-System Transfer in Indiana



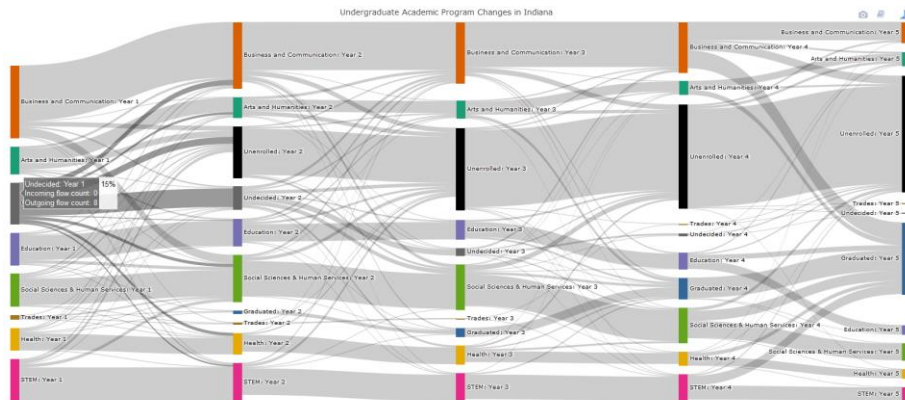
Transfer within the IU System



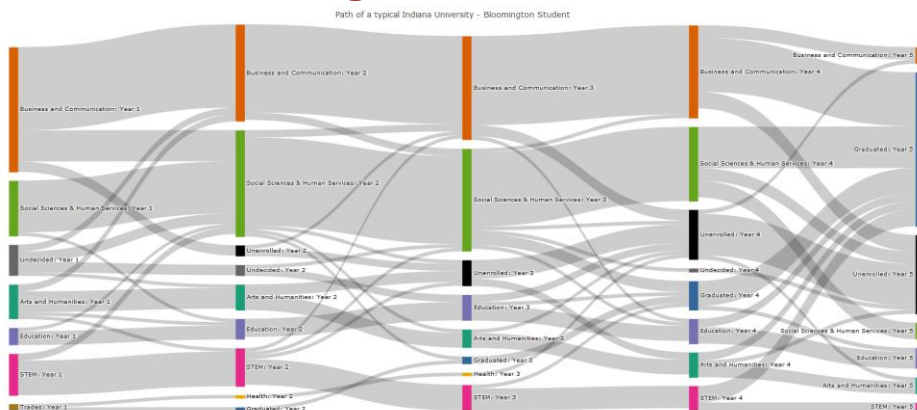
Undergraduate Academic Program Changes



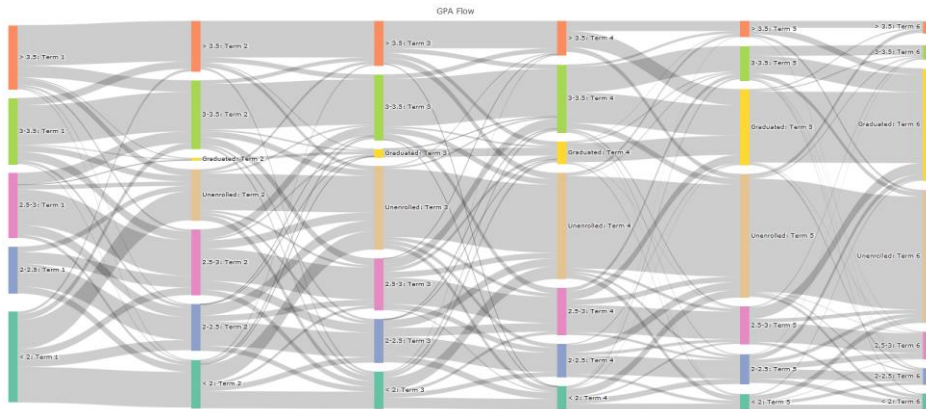
Undergraduate Academic Program Changes



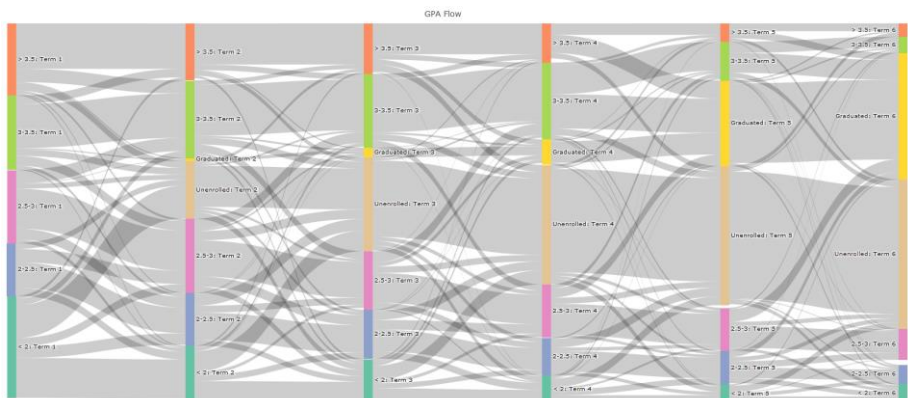
Path of a Indiana University Bloomington Student



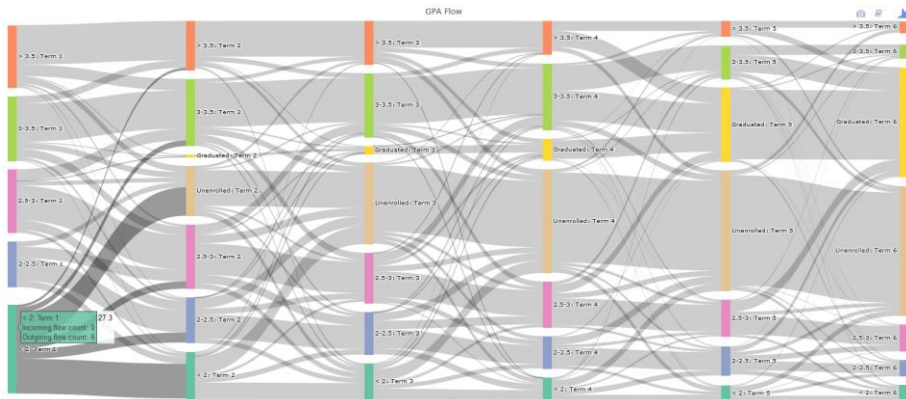
GPA Flow



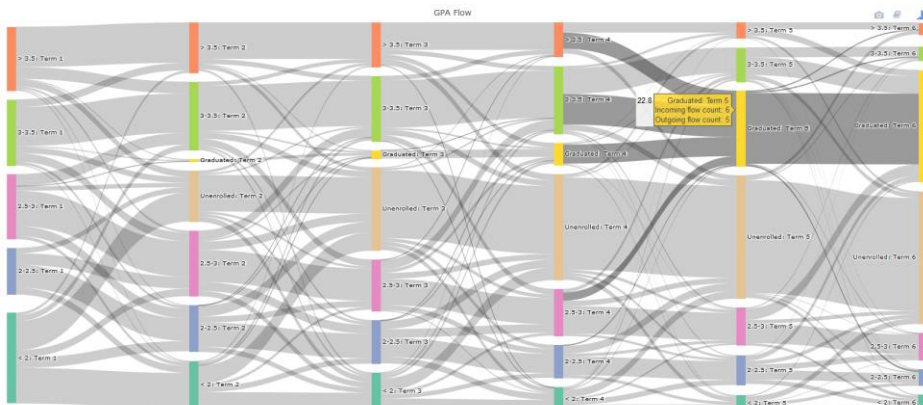
GPA Flow



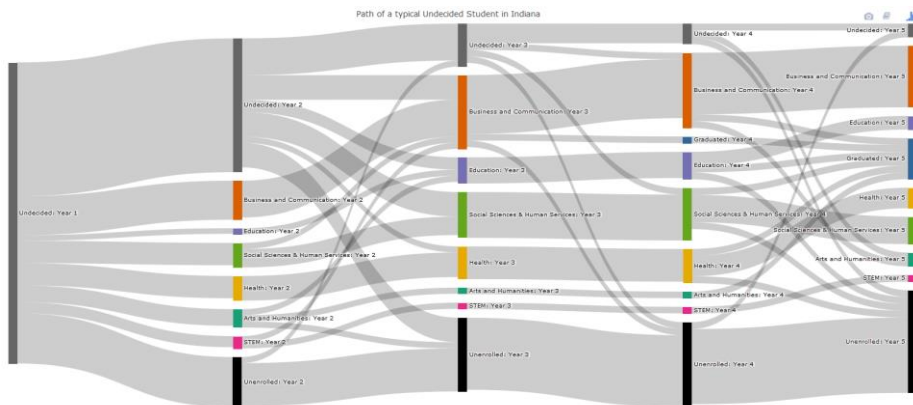
GPA Flow



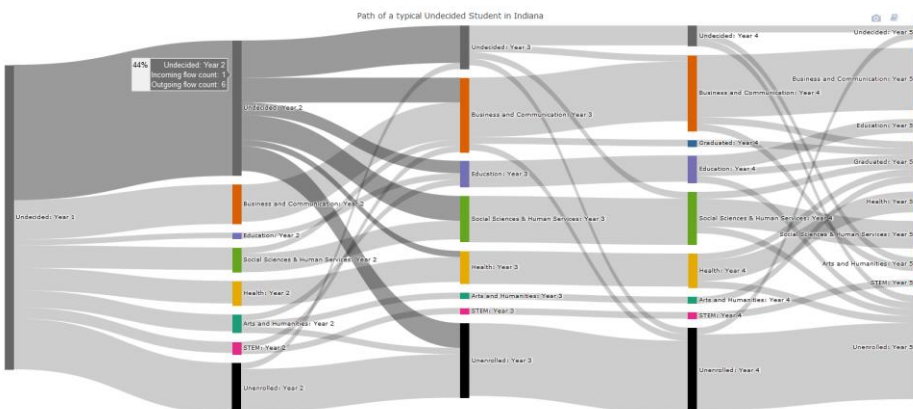
GPA Flow



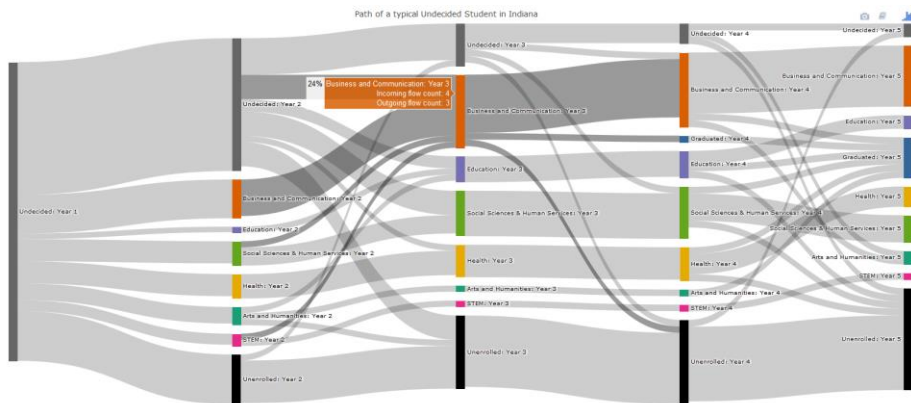
Path of an Undecided Student



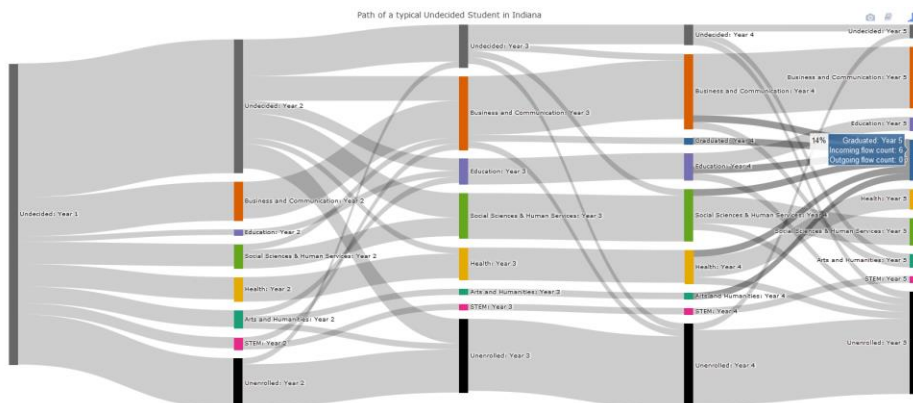
Path of an Undecided Student



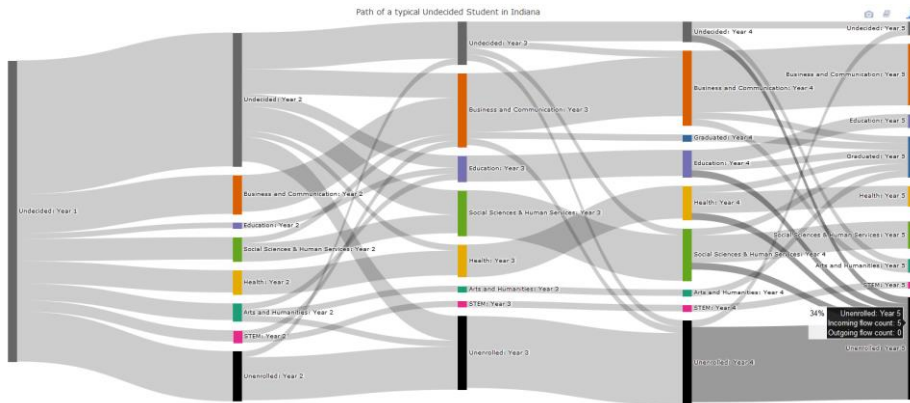
Path of an Undecided Student



Path of an Undecided Student



Path of an Undecided Student



AREAS FOR FURTHER RESEARCH

Further Research & Improvements

- Resolve data issues

Further Research & Improvements

- Resolve data issues
- Look at the impact of financial aid

Further Research & Improvements

- Resolve data issues
- Look at the impact of financial aid
- Study the correlation between dataset dimensions



Thank You

For questions please reach out to Adam or Alex at the Email address below:

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