NIAGARA UNIVERSITY

A STUDY ON DATA SCIENCE PROGRAMS OFFERED BY COLLEGES IN THE NEW YORK REGION

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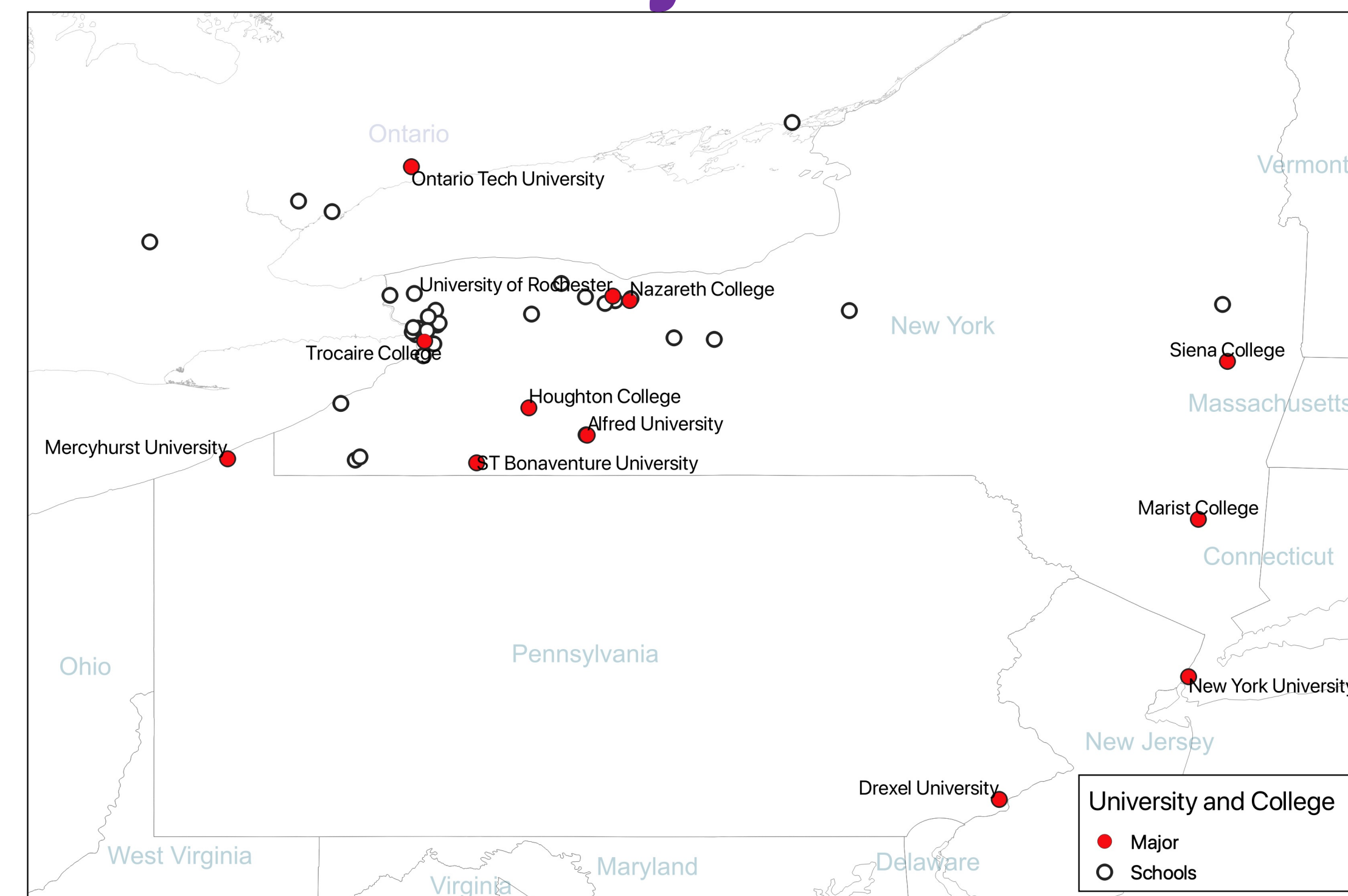
Most Common Courses	
Course	# of Schools that Offered Course
Data Science	8
Machine Learning	7
Database Systems	6
Data Structures & Algorithms	6
Calculus	6
Data Mining	6
Data Visualization & Analysis	5

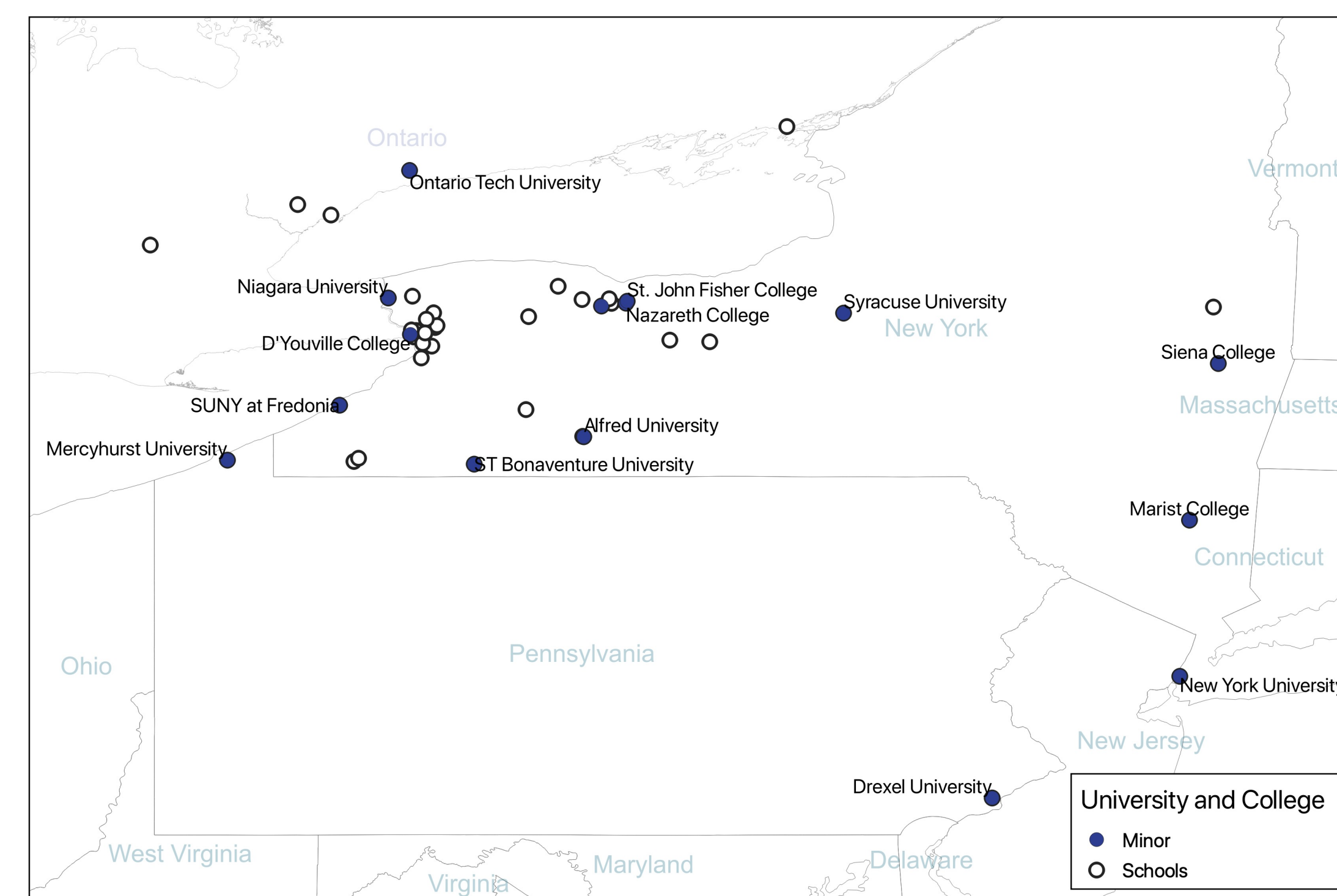| Most Common Keywords	
Keyword	# of Times Word is Used
Data	65
Computer	16
Machine	9
Information	9
Analytics	7
Structures	6
Visualization	6
Database	6
Business	6

Introduction

Recently, I have collected data on 46 different higher education schools around the New York area. The data I collected was pertaining to whether these schools had a program, major or minor, in data science or data analysis. My collection included whether the school had the program, how many courses their program needed for completion of the program, as well as any information on the courses the schools offered for these programs. In doing so, I've gathered information that has shown me the scarcity of a program such as these in the New York area, specifically in the Buffalo-Niagara region.
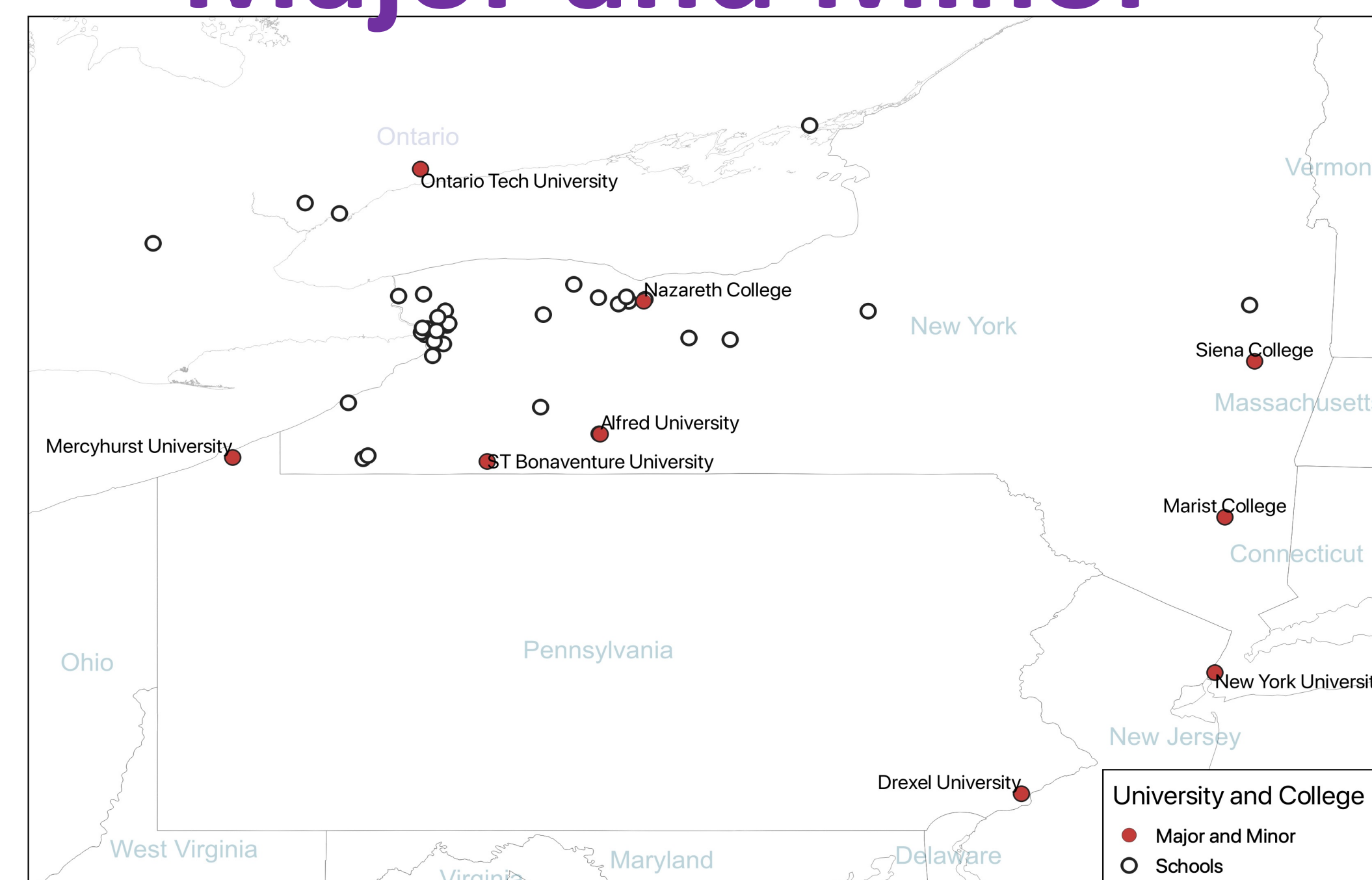
Goals

- Collect data on other schools' programs

- Determine if NU should consider Data Analysis as a future program of study

- Learn what courses are most common and important for this program that can then be offered at NU

of Schools

- Has Major Only — 6%
- Has Minor Only — 13%
- Has Both — 11%
- Has Neither — 70%

Majors

Minors

Major and Minor

Design and Development

- Collection of schools and courses with this program around Western New York

- Expanded collection to schools in all of New York, and nearby areas such as Pennsylvania and Ontario

- Perform data cleaning to determine which courses and keywords are most frequent for data analysis programs

- Use data visualization to create maps of schools with these programs

Conclusion

Research during this independent study has taught me a lot on the process of data collection and data cleaning. While doing the research for this project, I was using the skills of a data analysis to collect and analyze the information. I have also discovered through this data that schools that offer both and major and minor in this field are minimal around our area, and nonexistent in the Buffalo-Niagara Region. With data science growing as a field in the job market, I think it is important for NU to begin developing a program to offer both the major and minor to our students.

Future Work

- Continue to collect data from schools across the country

- Implement new courses into NU's curriculum

- Develop a program for a bachelor's degree in data analysis/science at NU