"Efficiency Concern” and “Crime Concern” mainly with the function of network analysis. Campus. We successfully improved the shuttle system by relocation several bus stops in order to meet “Student Concern”, “Efficiency Concern” and “Crime Concern” mainly with the function of network analysis.

The Bearcats Transportation System (BTS) is a shuttle service with seven routes launched by the University of Cincinnati (UC) to facilitate the students in commuting from the residential neighborhoods to the Main Campus. The safety and efficiency of BTS attract our attention after the analysis of the schedule and routes of the shuttles with student density and crime data around UC Campus. We successfully improved the shuttle system by relocation several bus stops in order to meet “Student Concern”, “Efficiency Concern” and “Crime Concern” mainly with the function of network analysis.

The WebGIS Application of Finding the Closest Gas Station is a web application designed by using ArcGIS Desktop Suite 10.X, ArcGIS Server, ArcGIS Online, Business Analyst Extension, Community Analysis Extension. The WebGIS Application is written in HTML and JavaScript on Flex platform with two ArcGIS APIs: “Geocoding an address” and “Closest Facility”. By typing an address on the User Interface, the application will load the gas station data saved on the server and calculate the route(s) as well as estimated travel time to the closest gas station(s). The finds were shared with Philadelphia’s Office of Sustainability for review which prompted re-evaluation of the index to improve the accuracy.

The Analysis of Solar Potential Index in Philadelphia
A solar roof potential analysis of Philadelphia buildings would assist home owners and businesses in assessing whether their property was well suited for a solar project. Vendor, CyberCity 3D, delivered an articulated roof model for a 3 square mile pilot area of lower North Philadelphia, which included roof attributes of available area, pitch angle and solar azimuth. This dataset allowed us to develop a Solar Roof Potential based on the most opportune conditions for solar projects. The potential index was calculated for each roof feature of the pilot area and symbolized from based on the score. The results were made available internally for review on an ArcGISOnline Interactive map that allows users to search for the solar potential index of a specific roof feature. The finds were shared with Philadelphia’s Office of Sustainability for review which prompted re-evaluation of the index to improve the accuracy.

New Store Location Model for Sam’s Club
Building a new store location model with Business Analyst Extension of ArcGIS will assist Sam’s Club to choose where to expand their business. The model is based on the demographics around each existing stores in Pennsylvania by using a driving time analysis, then determining the segmentation profile target group which Sam’s Club should attempt to locate near, a competitive analysis indicates the direct and indirect competitors, and a market analysis based on market surplus and leakage of grocery sales in Pennsylvania. Finally, an existing shopping center in that market was picked to locate the new store.

Skills
Programming: Visual Basic, C/C++, Python, HTML, JavaScript, GoogleMap API, Flex.
Statistics: Excel, SPSS, JMP, Matlab.
Others: Adobe Illustrator, Excel, SPSS, JMP, Matlab.