Project Proposal for Introduction to Programming

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Students’ decisions making process on future education is influenced by a combination of factors, including but not limited to their past academic achievements, quality of schools, interests and external environment. The key question for policy makers is how we could improve the education environment in the most cost-effective way. Based on a survey conducted in Ohio, safety is the top one concern when choosing schools for their children. It is important to figure out following questions: Does safety (crime rate at school) affect school choices making? If so, to what extent? Does it have the same effect on students of different ethnicity, different ages or different background? Are crimes at school associated frequency and types of disciplinary actions at school?

These questions are under the scope of our final project. We will explore the answers to these questions based on analysis from two data set. Data source 1 is High School Longitudinal Study of 2009 (HSLS:09), from The National Center for Education Statistics (NCES), with the link: <https://nces.ed.gov/surveys/hsls09/index.asp>. Data Source 2 is FBI Crime Data API, with the link: <https://crime-data-explorer.fr.cloud.gov/api>. HSLS 09 is a nationally representative, longitudinal study of 23,000+ 9th graders from 944 schools in 2009, providing information about their academic records, schools, parents and school counselors. FBI Crime Data is collected from law state and local law enforcement agencies, providing information about each offense, such as the time, the demographics of the offenders/victims, the known relationships between the offenders and victims, and many other details around how and where crime occurs.

The baseline of this project is to figure out the association between crime rates at school and school choices, and the different influence of safety on different group of students. Possible extensions include mapping, or future school choice predictions.

Here is a link to repository: git@github.com:cicilau/Final-project-safety-and-school-choices.git