**About the Data**

This project seeks to identify zip codes in Bexar County that have low or high educational outcomes using Python programming language. Education outcome data is pulled through an API from the U.S Census American Community Survey (ACS). Specifically,  the ACS 5 - Year Data sets, which allows us to work with U.S Census data that is already more condensed and provides yearly data on geographies and topics.

**Main points**

* Data uses the American Community Survey- Data Profiles Tables.
* In 2018, 69% of Bexar County's Total Population reported their education attainment levels for the following variables: ‘Less than 9th Grade’ , Less than High School’, ‘High School Equivalent', ‘Bachelor's Degree', and ‘Graduate/Professional Degree’. This population is what makes up the created variable, “Education\_Zip\_Populaiton”. Years 2014-2017 that are also observed in this project may have higher or lower response rate that will make up its respective ‘Education\_Zip\_Population’
* “Education\_Zip\_Population” is each zip code's total population that reported their education in the variables listed above.
* All education levels are from those who are residents 25 years old and older.( Below 9th Grade Education, Less than High School, etc.)
* “Education\_Zip\_Population” is also only made up of residents who are 25 years old and older. Is the result of aggregated age groups 25-85+, and can still be broken down to zip code.
* Uses ACS’s API to retrieve data, for Zip Code Tabulation.

**Overview**

**American Community Survey 5-Year Data(2009 - 2018)**

The American Community Survey (ACS) is an ongoing survey that provides data every year -- giving communities the current information they need to plan investments and services. The ACS covers a broad range of topics about social, economic, demographic, and housing characteristics of the U.S. population.

The 5-year estimates from the ACS are "period" estimates that represent data collected over a period of time. The primary advantage of using multiyear estimates is the increased statistical reliability of the data for less populated areas and small population subgroups.

The 5-year estimates are available for all geographies down to the block group level.  In total, there are 87 different summary levels available with over 578,000 geographic areas.  Unlike the 1-year estimates, geographies do not have to meet a particular population threshold in order to be published.  Detail tables, Subject tables, Data Profiles, and Comparison profiles include the following geographies: nation, all states (including DC and Puerto Rico), all metropolitan areas, all congressional districts (116th congress), all counties, all places, all tracts and block groups.

* **Data Profiles** contain broad social, economic, housing, and demographic information. The data are presented as population counts and percentages. There are over 1,000 variables in this dataset. \*\*\*Data Profiles is the data set used for project information.\*\*\*

**Links:**

URL for ACS Data Overview: <https://www.census.gov/data/developers/data-sets/acs-5year.html>

URL/API for Zip Code Tabulation: Example only [https://api.census.gov/data/2018/acs/acs5/profile?get=DP04\_0001E&for=zip%20code%20tabulation%20area:\*](https://api.census.gov/data/2018/acs/acs5/profile?get=DP04_0001E&for=zip%20code%20tabulation%20area:*)

**Variables Used from ACS:(5-Year) Data Profiles(variable list found here:** <https://api.census.gov/data/2018/acs/acs5/profile.html> **)**

1. DP05\_0005E

* Estimate!!SEX AND AGE!!Total population!!Under 5 years

1. DP05\_0006E

* Estimate!!SEX AND AGE!!Total population!!5 to 9 years

1. DP05\_0007E

* Estimate!!SEX AND AGE!!Total population!!10 to 14 years

1. DP05\_0008E

* Estimate!!SEX AND AGE!!Total population!!15 to 19 years

1. DP05\_0009E

* Estimate!!SEX AND AGE!!Total population!!20 to 24 years

1. DP05\_0010E

* Estimate!!SEX AND AGE!!Total population!!25 to 34 years

1. DP05\_0011E

* Estimate!!SEX AND AGE!!Total population!!35 to 44 years

1. DP05\_0012E

* Estimate!!SEX AND AGE!!Total population!!45 to 54 years

1. DP05\_0013E

* Estimate!!SEX AND AGE!!Total population!!55 to 59 years

1. DP05\_0014E

* Estimate!!SEX AND AGE!!Total population!!60 to 64 years

1. DP05\_0015E

* Estimate!!SEX AND AGE!!Total population!!65 to 74 years

1. DP05\_0016E

* Estimate!!SEX AND AGE!!Total population!!75 to 84 years

1. DP05\_0017E

* Estimate!!SEX AND AGE!!Total population!!85 years and over

1. DP02\_0059E

* Estimate!!EDUCATIONAL ATTAINMENT!!Population 25 years and over!!Less than 9th grade

1. DP02\_0060E

* Estimate!!EDUCATIONAL ATTAINMENT!!Population 25 years and over!!9th to 12th grade, no diploma

1. DP02\_0061E

* Estimate!!EDUCATIONAL ATTAINMENT!!Population 25 years and over!!High school graduate (includes equivalency)

1. DP02\_0064E

* Estimate!!EDUCATIONAL ATTAINMENT!!Population 25 years and over!!Bachelor's degree

1. DP02\_0065E

* Estimate!!EDUCATIONAL ATTAINMENT!!Population 25 years and over!!Graduate or professional degree