



Let's Pivot Basic Data Analysis Using Microsoft Excel

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Presenters

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Presentation Objective

Provide the basics on
using Microsoft Excel
To Conduct Basic
Analyses

Crash Data

Census Data

Data Sources Utilized

- Fatal Analysis Reporting System (FARS)
 - <https://www.nhtsa.gov/crash-data-systems/fatality-analysis-reporting-system>
- Census Data American Community Survey
 - <https://data.census.gov/>



Excel Resources

- YouTube Videos
 - [Learn Pivot Tables in 6 Minutes \(Microsoft Excel\)](#)
- Office Support
 - [Basic tasks in Excel](#)
 - [Create a PivotTable to analyze worksheet data](#)
 - [Overview of PivotTables and PivotCharts](#)



Crash Data



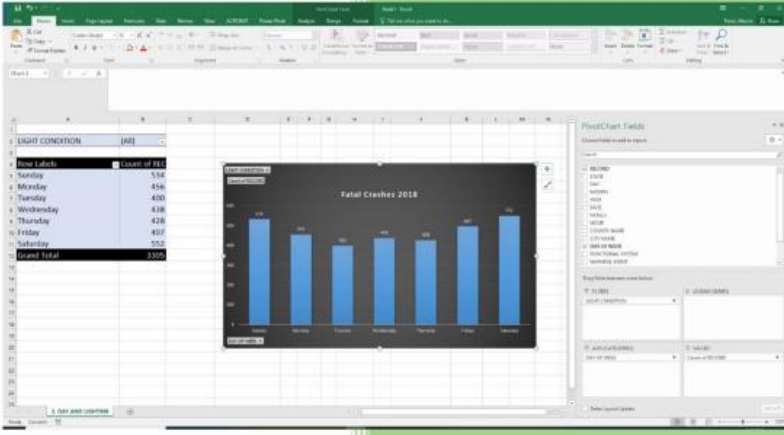
Crash Data Background

- Fatality Analysis Reporting System (FARS)
 - Data on a census of fatal traffic crashes the US, the District of Columbia, and Puerto Rico
 - Crashes involving a motor vehicle, on a public roadway and resulted in a death
 - Crash year: 2018

Crash Data Walk Through

2020

PivotTable Basics



Three PivotTable Exercises

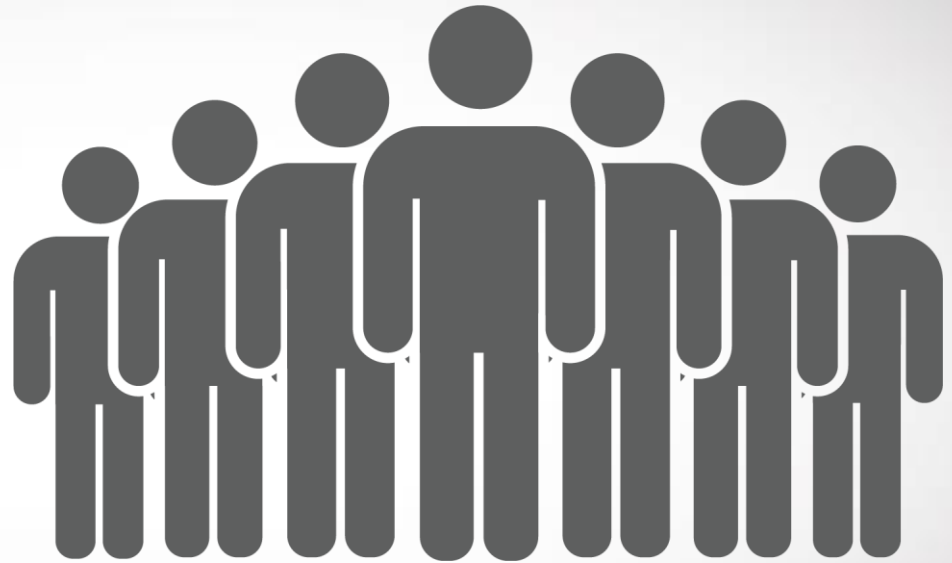
Building a PivotTable with calculated counts and percentages of crashes

Building a PivotTable and a PivotChart to visualize crash data

Starting a new PivotTable



Census Data



Census Data Background

- American Community Survey (ACS)
 - Leading source for information on population, housing, and other characteristics
 - Sample
 - Different than the census conducted every ten years
 - Adds information on Education, Employment, Internet Access, and Transportation

Census Topic Areas

Business and Economy

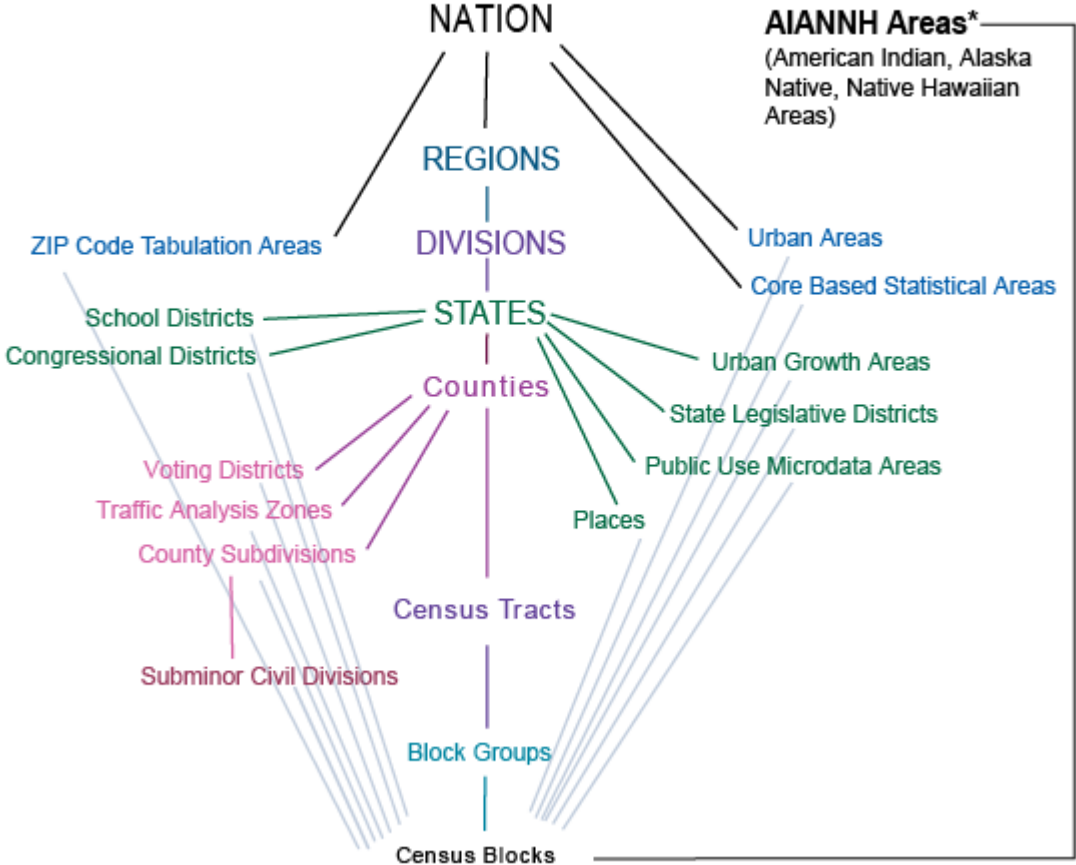
Government

Populations

- Education
- Employment
- Family and Living Arrangements
- Health
- Housing
- Income/Poverty
- Race/Ethnicity

Census Geographic Areas

Standard Hierarchy of Census Geographic Entities



ACS Estimates

	1-year	5-year estimates
Population Size	65,000+	Data for All areas
Sample Size	Smallest	Largest
Reliability	Least	Highest
Current	Most	Least

Census Data Portal

- <https://data.census.gov/>



The image shows a screenshot of the United States Census Bureau Data Portal homepage. At the top, there is a dark blue header with the United States Census Bureau logo. Below the header, the main content area is white. On the left, the text "Explore Census Data" is displayed in a large, dark blue font. Below this, a paragraph states: "The Census Bureau is the leading source of quality data about the nation's people and economy." Underneath the paragraph is a search bar with a magnifying glass icon and the placeholder text "I'm looking for ...". Below the search bar, the text "Advanced Search" is written in a smaller, teal font. On the right side of the page, there is an illustration of a desktop monitor, a laptop, and a smartphone. The desktop monitor displays a map of the United States with a blue river, the laptop displays a bar chart, and the smartphone displays a list of data points.

United States
Census
Bureau

Explore Census Data

The Census Bureau is the leading source of quality data about the nation's people and economy.

🔍 I'm looking for ...

[Advanced Search](#)

Census Data Walk Through

2020

**Let's Pivot Basic Data Analysis
Using Microsoft Excel: Census
Data**



Census Data Walk Through

Accessing
ACS Data

Downloading
ACS Data

ACS Data in
Excel

Census
Mapping

2020 Census

- <https://2020census.gov/>



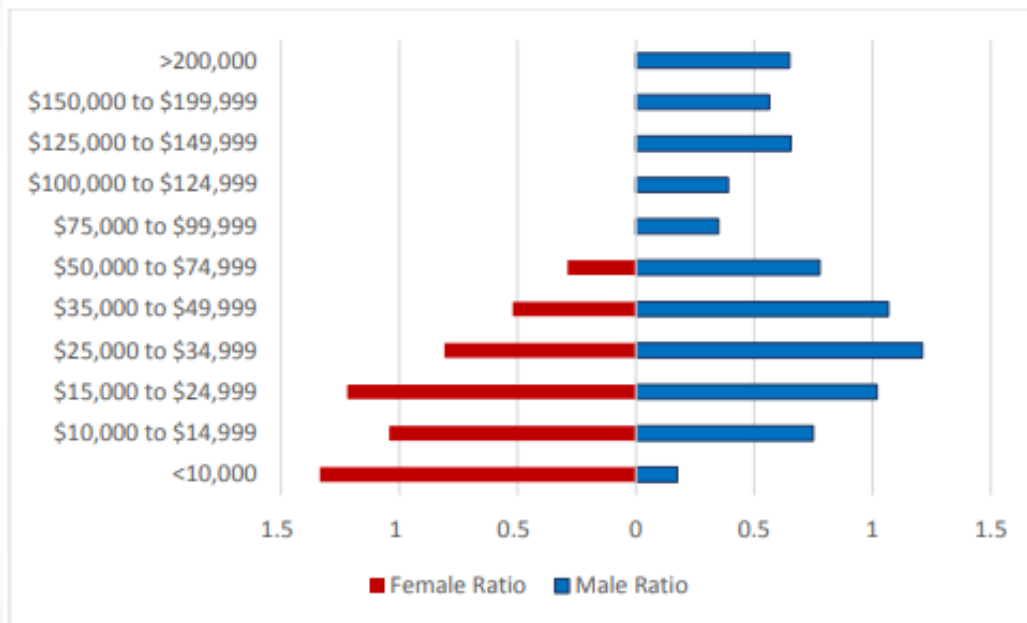
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“Your response matters. Health clinics. Fire departments. Schools. Event roads and highways. The census can shape many different aspects of your community” (United States Census Bureau, 2020).

Next Steps (Advanced Analysis)

- Link Census and Crash Data by County
- Geospatial Analysis
 - Link shapefile to Data Using GEOID

Figure 1. Proportion of Drivers in Fatal OMV Injury Crashes to the Proportion of the Population by Income and Gender





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A decorative horizontal bar at the bottom of the slide, divided into five colored segments: teal, dark red, green, blue, and yellow.

References

- Missouri Census Data Center. (2020). Intro to Census Geography, Summary Levels, and GeoIDs. Retrieved from: <http://mcdc.missouri.edu/geography/sumlevs/>
- Texas Demographic Center. (2020). Census 2020. Retrieved from: <https://demographics.texas.gov/Data/Decennial/2020/>
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