Data Visualization Portfolio

Applied Justice Solutions LLC
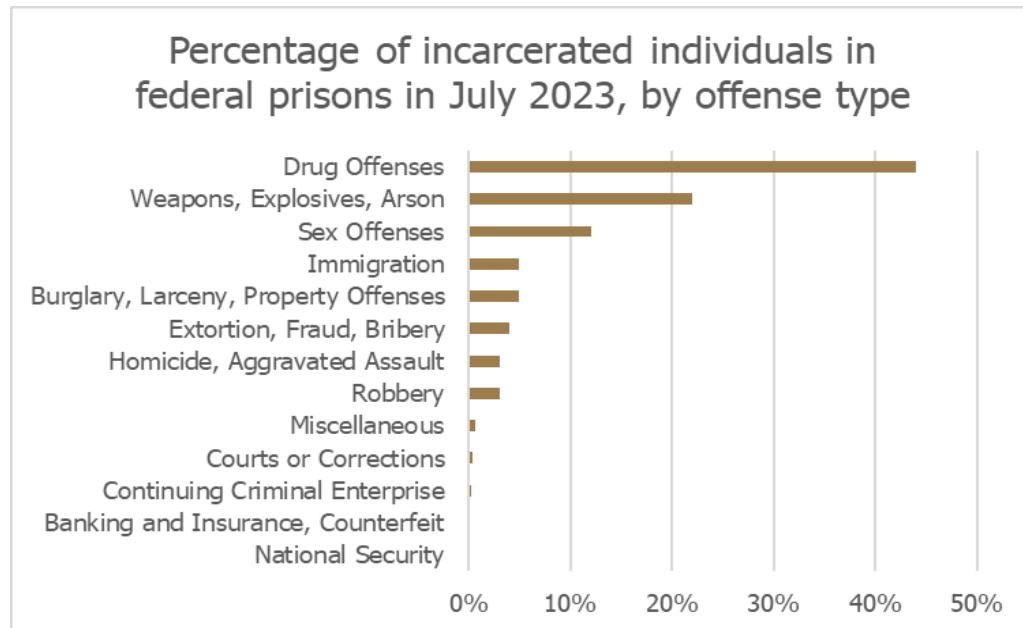
Graphs and Charts

Default Graphs

- Tend to be cluttered and harder to read

- Often are not grayscale or accessibility friendly

- Harder to figure out the main takeaway

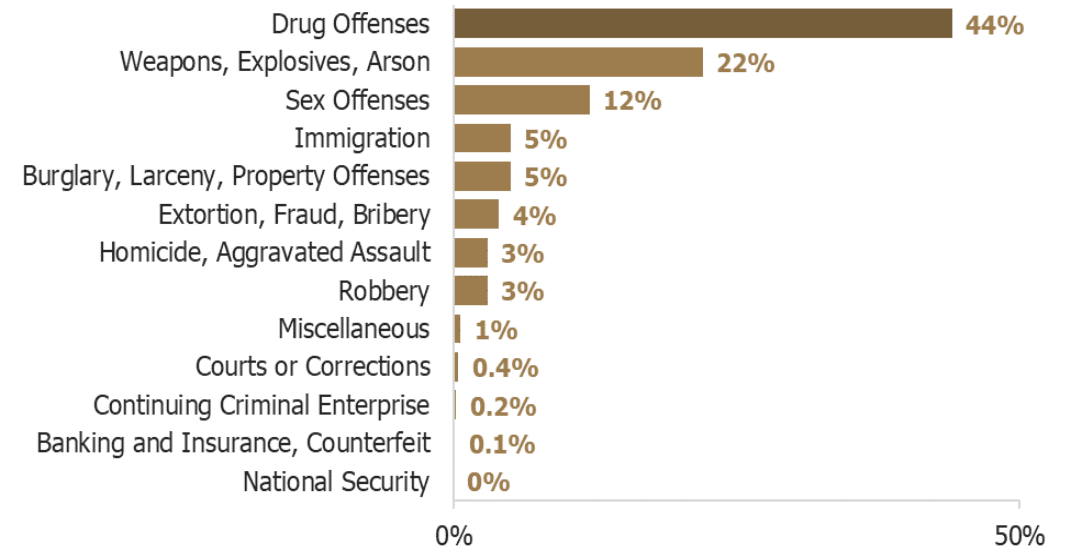- Boring and often not visually appealing

AJS Graphs

- Follow current guidelines by industry experts on data visualization

- Less clutter, better readability

- Storytelling graphs

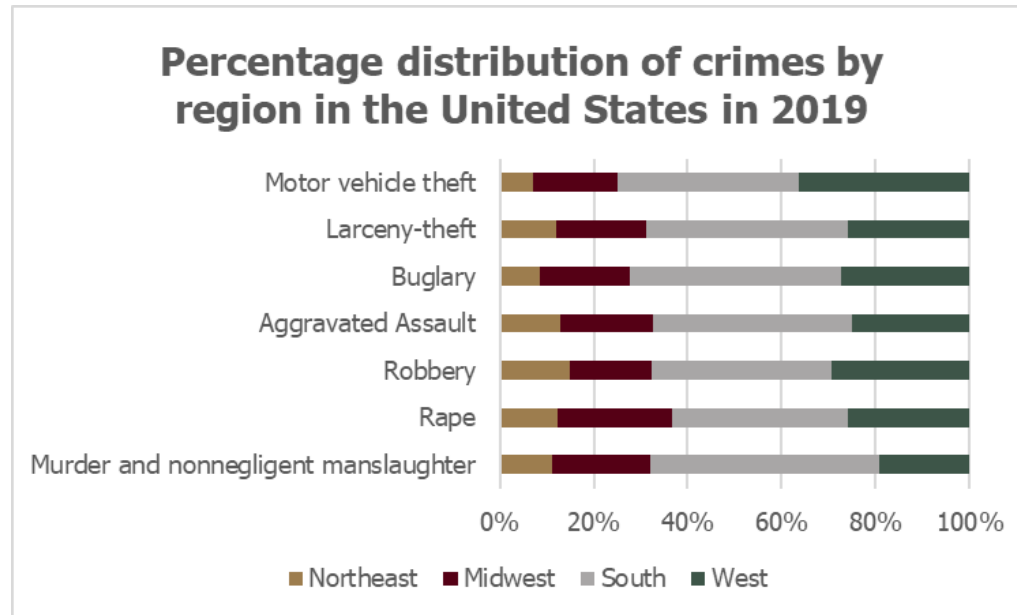- Boring spreadsheets → visually appealing data visualizations

Default Graphs

Percentage of incarcerated individuals in federal prisons in July 2023, by offense type

Offense Type	Percentage
Drug Offenses	~44%
Weapons, Explosives, Arson	~22%
Sex Offenses	~12%
Immigration	
Burglary, Larceny, Property Offenses	
Extortion, Fraud, Bribery	
Homicide, Aggravated Assault	
Robbery	
Miscellaneous	
Courts or Corrections	
Continuing Criminal Enterprise	
Banking and Insurance, Counterfeit	
National Security	

AJS Graphs

Almost half of the individuals in federal prison were incarcerated for drug offenses in July 2023

Offense Type	Percentage
Drug Offenses	44%
Weapons, Explosives, Arson	22%
Sex Offenses	12%
Immigration	5%
Burglary, Larceny, Property Offenses	5%
Extortion, Fraud, Bribery	4%
Homicide, Aggravated Assault	3%
Robbery	3%
Miscellaneous	1%
Courts or Corrections	0.4%
Continuing Criminal Enterprise	0.2%
Banking and Insurance, Counterfeit	0.1%
National Security	0%

(Source: https://www.bop.gov/about/statistics/statistics_inmate_offenses.jsp)
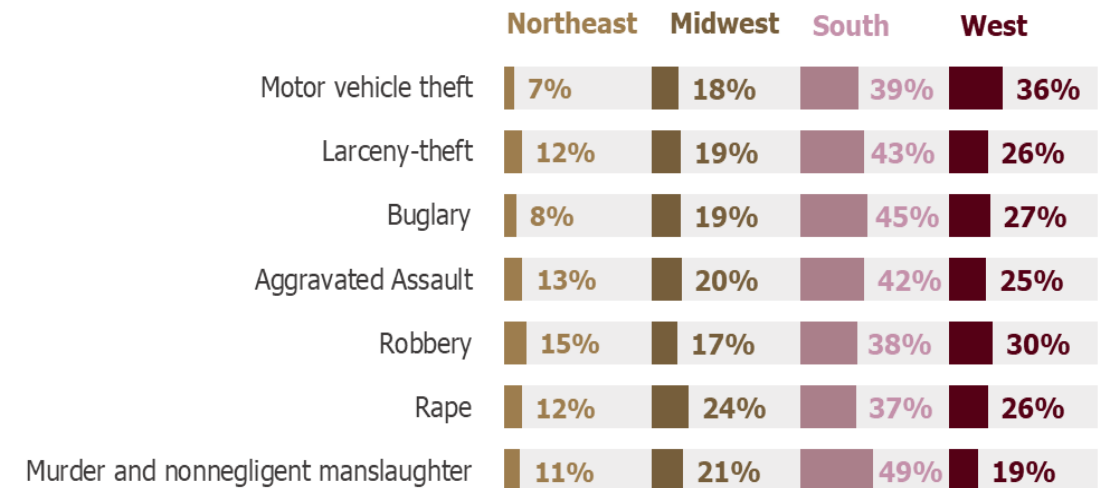
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Default Graphs

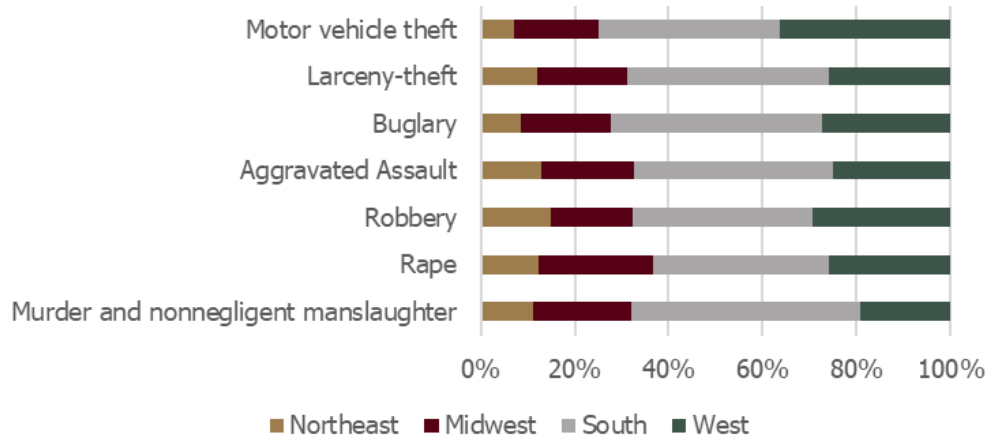# AJS Graphs

Percentage distribution of crimes by region in the United States in 2019

Percentage distribution of crimes by region in the United States in 2019

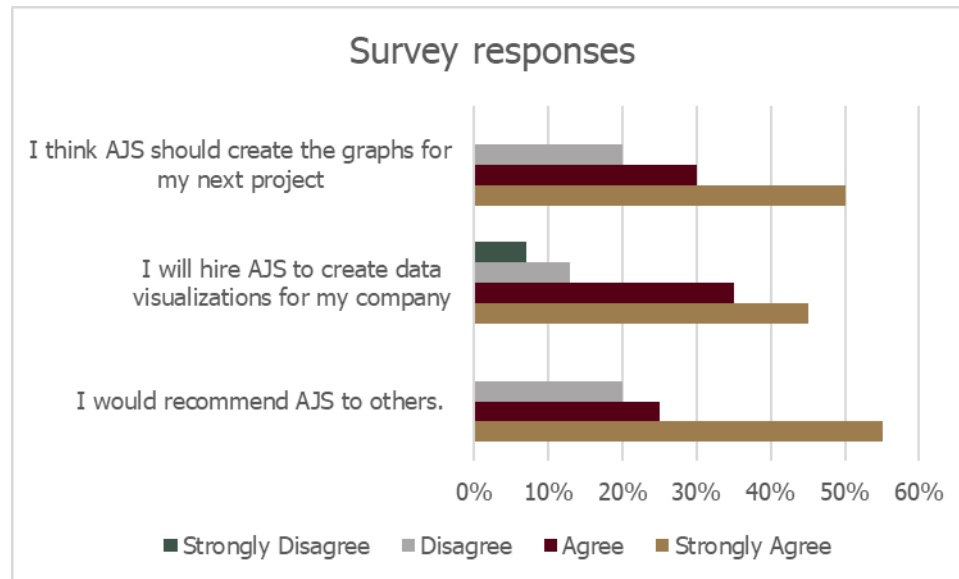|	Northeast	Midwest	South	West
Motor vehicle theft	7%	18%	39%	36%
Larceny-theft	12%	19%	43%	26%
Buglary	8%	19%	45%	27%
Aggravated Assault	13%	20%	42%	25%
Robbery	15%	17%	38%	30%
Rape	12%	24%	37%	26%
Murder and nonnegligent manslaughter	11%	21%	49%	19%

Motor vehicle theft
Larceny-theft
Buglary
Aggravated Assault
Robbery
Rape
Murder and nonnegligent manslaughter

0% 20% 40% 60% 80% 100%

■ Northeast ■ Midwest ■ South ■ West

Default Graphs

Percentage distribution of crimes by region in the United States in 2019

Crime	Northeast	Midwest	South	West
Motor vehicle theft				
Larceny-theft				
Buglary				
Aggravated Assault				
Robbery				
Rape				
Murder and nonnegligent manslaughter				

0% 20% 40% 60% 80% 100%

■ Northeast ■ Midwest ■ South ■ West

AJS Graphs

The South had the **highest percentage** for each of the below **crimes** among all regions in the United States in 2019

	Northeast	Midwest	South	West
Motor vehicle theft	7%	18%	39%	36%
Larceny-theft	12%	19%	43%	26%
Buglary	8%	19%	45%	27%
Aggravated Assault	13%	20%	42%	25%
Robbery	15%	17%	38%	30%
Rape	12%	24%	37%	26%
Murder and nonnegligent manslaughter	11%	21%	49%	19%

(Source: https://ucr.fbi.gov/crime-in-the-u.s/2019/crime-in-the-u.s.-2019/topic-pages/tables/table-3)

Default Graphs

Survey responses

I think AJS should create the graphs for my next project

I will hire AJS to create data visualizations for my company

I would recommend AJS to others.

0% 10% 20% 30% 40% 50% 60%

■ Strongly Disagree ■ Disagree ■ Agree ■ Strongly Agree

AJS Graphs

The majority of survey respondents thinks **Applied Justice Solutions is a great choice** for their data visualization needs.
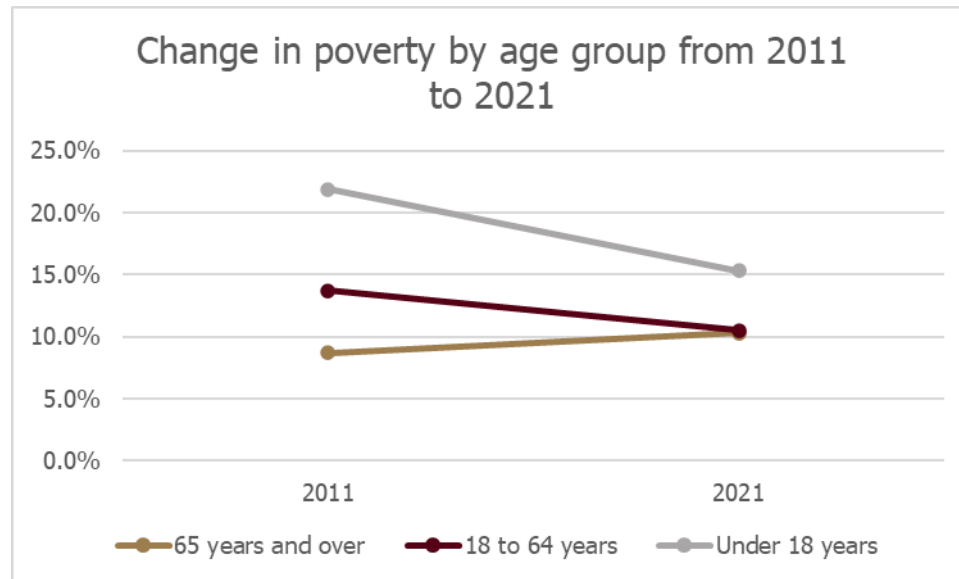
Strongly Agree | Agree | Disagree | **Strongly Disagree**

I think AJS should create the graphs for my next project.

| 50% | 30% | 20% |

I will hire AJS to create data visualizations for my company.

| 45% | 35% | 13% | 7% |

I would recommend AJS to others.

| 55% | 25% | 20% |

(Source: Fictious data)

Default Graphs

Overdose deaths by drug types between 2016 and 2021

AJS Graphs

The **most rapid increase** in drug overdose deaths between 2016 and 2021 can be attributed to **Fentanyl**

drug overdose deaths

Default Graphs

Change in poverty by age group from 2011 to 2021
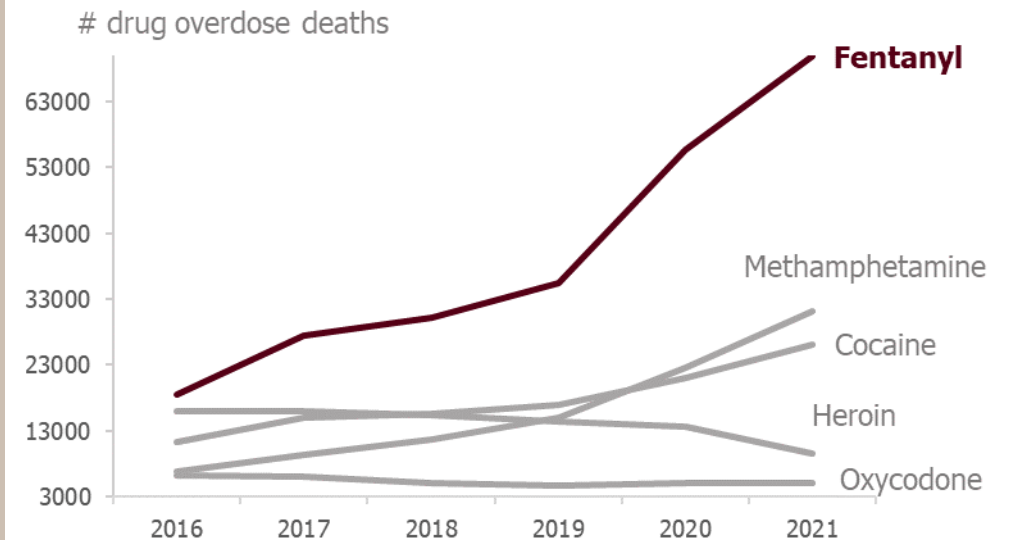
	2011	2021
65 years and over		
18 to 64 years		
Under 18 years		

AJS Graphs

The most drastic change in poverty from **2011** to **2021** was seen in a rate drop for under-18-year-olds, while the poverty rate for the remaining age groups increased.
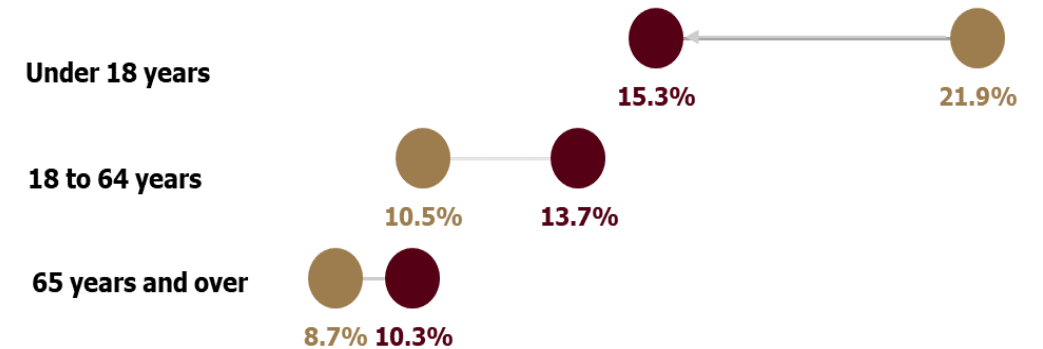
Under 18 years

15.3%   21.9%

18 to 64 years

10.5%   13.7%

65 years and over

8.7% 10.3%

Default Graphs
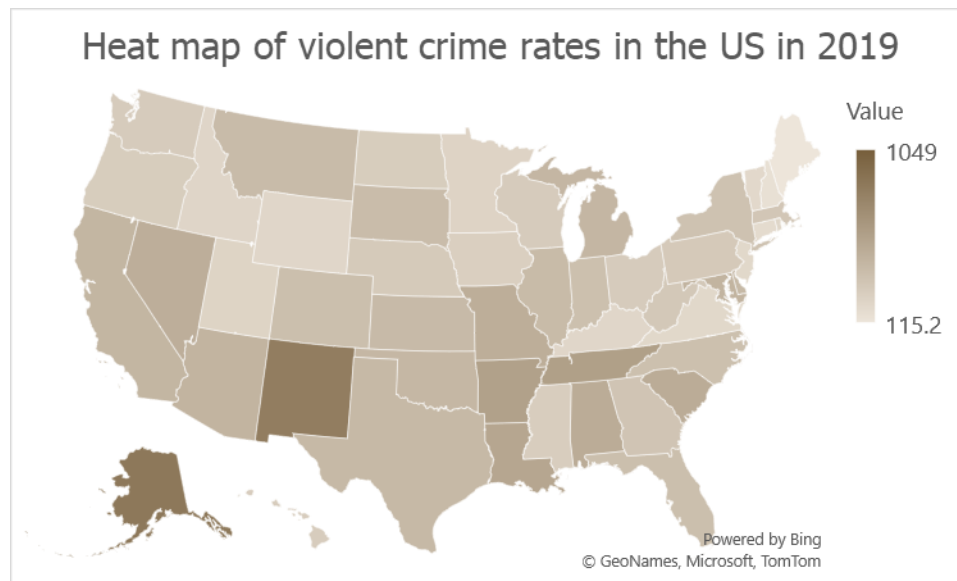
AJS Graphs

Map showing the violent crime rate per 100,00 in 2019
(States divided into quartiles)

Lowest 25%			Highest 25%
115.2 - 272.25	272.25 - 358.6	358.6 - 439.3	439.3 - 1049

Heat map of violent crime rates in the US in 2019

Value
1049

115.2

Powered by Bing
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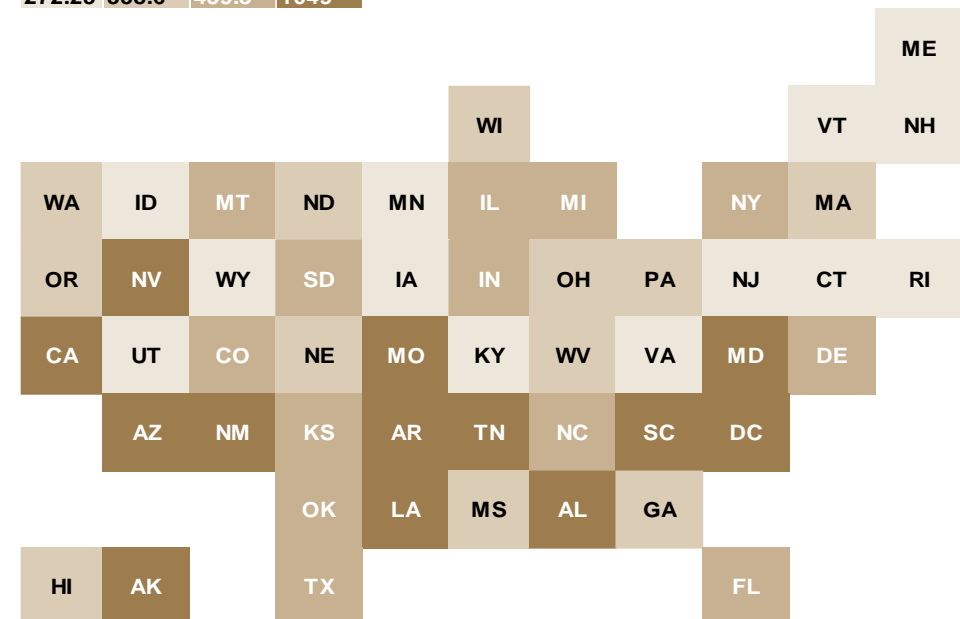
Dashboards

Change in Drug Use By Age Group from 2018 to 2019

This dashboard shows the change in self-reported drug use of three different age groups from 2018 to 2019. It displays the percentage changes by drug type.
(Source: https://www.samhsa.gov/data/release/2019-national-survey-drug-use-and-health-nsduh-releases)

	12-17 year olds	18-25 year olds	26+ year olds
All Drugs	0.5%	0.4%	1.6%
Marijuana	0.7%	0.6%	1.9%
Cocaine	0.0%	-0.5%	0.1%
Hallucinogens	0.3%	0.3%	0.2%
LSD	0.3%	0.1%	0.1%
Ecstasy	0.1%	0.1%	0.0%
Inhalants	0.3%	0.2%	0.0%
Methamphetamine	0.0%	0.0%	0.1%
Psychotherapeutics	-0.5%	-0.8%	0.0%
Pain Relievers	-0.5%	-0.3%	0.0%
Stimulants	0.2%	-0.7%	0.0%
Tranquilizers or Sedatives	0.0%	-0.7%	-0.1%
Tranquilizers	-0.1%	-0.7%	-0.1%
Sedatives	0.0%	-0.1%	0.0%
Benzodiazepines	-0.1%	-0.7%	-0.1%
Opioids	-0.5%	-0.3%	0.0%

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Distribution of Incarcerated Individuals by Crime Type in Georgia State Prisons for the Year 2021

This dashboard compares the 15 counties in Georgia with the largest incarcerated populations in state prisons in 2021. It displays the percentage breakdown of crime types for which individuals, housed in those counties, were convicted. (Source: https://georgiadata.org/data/data-tables)

	Violent/Sex Crimes	Property Crimes	Drug/DUI Crimes	Other Crimes
Fulton County	83%	8%	5%	4%
Dekalb County	86%	7%	5%	3%
Gwinnett County	75%	9%	13%	4%
Richmond County	75%	12%	6%	7%
Cobb County	74%	10%	11%	5%
Chatham County	77%	8%	8%	7%
Clayton County	84%	8%	5%	3%
Bibb County	73%	16%	4%	7%
Muscogee County	77%	12%	6%	6%
Floyd County	59%	15%	15%	10%
Dougherty County	75%	14%	6%	6%
Henry County	79%	10%	6%	5%
Houston County	66%	20%	9%	5%
Whitfield County	47%	14%	30%	9%
Hall County	71%	11%	12%	6%

Distribution of Incarcerated Individuals by Crime Type in Georgia State Prisons for the Year 2021

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Gwinnett County	75%	9%	13%	4%
Richmond County	75%	12%	6%	7%
Cobb County	74%	10%	11%	5%
Chatham County	77%	8%	8%	7%
Clayton County	84%	8%	5%	3%
Bibb County	73%	16%	4%	7%
Muscogee County	77%	12%	6%	6%
Floyd County	59%	15%	15%	10%
Dougherty County	75%	14%	6%	6%
Henry County	79%	10%	6%	5%
Houston County	66%	20%	9%	5%
Whitfield County	47%	14%	30%	9%
Hall County	71%	11%	12%	6%
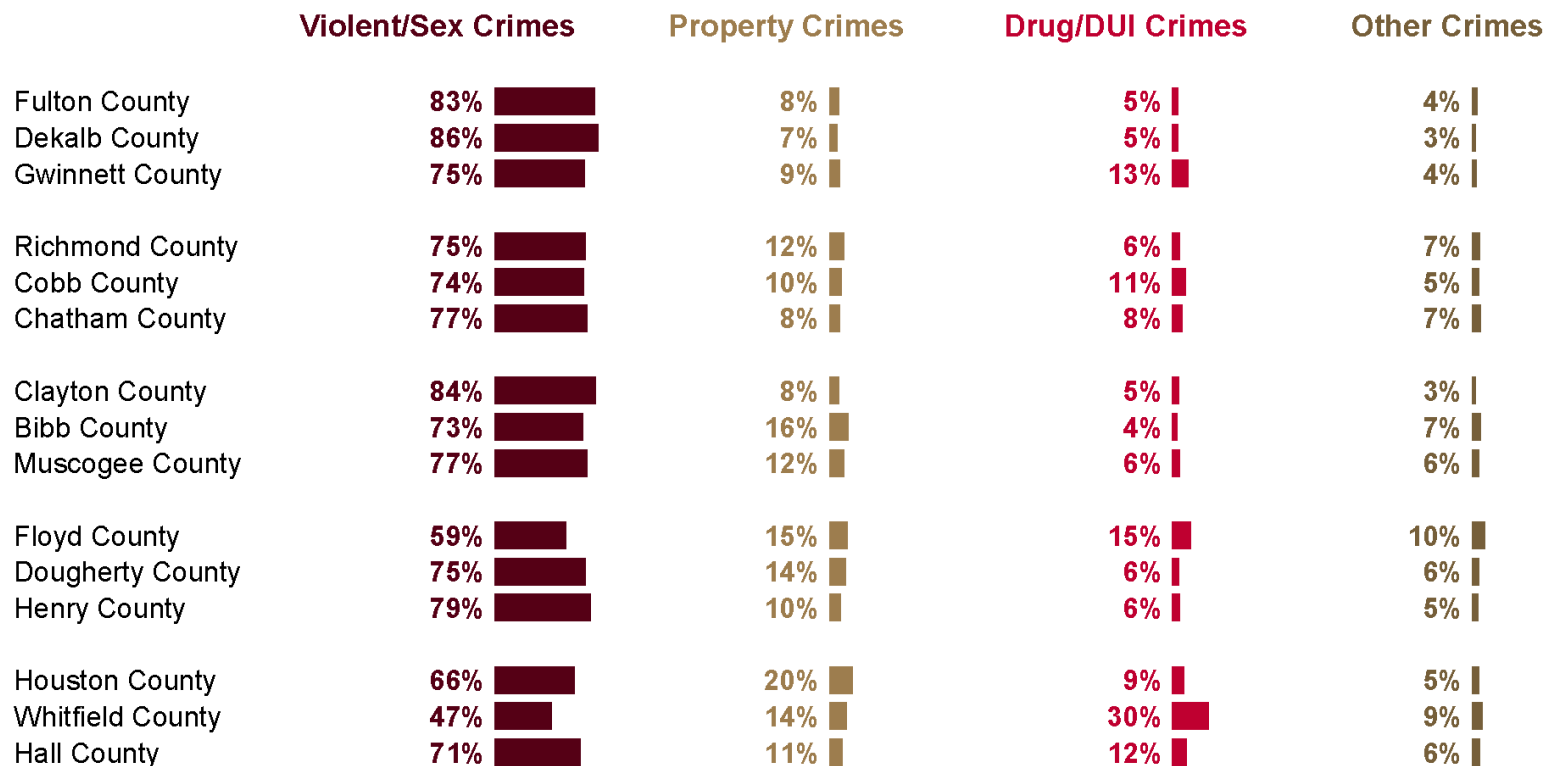
National Crime Rate Dashboard

This dashboard displays crime rates across the United States from 2010 to 2020 (from 2013 to 2020 for rape, due to the definition change). The rates are presented per 100,000 people and are provided by the FBI through the Crime Data Explorer (https://cde.ucr.cjis.gov/).

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
Violent Crime												
All Violent Crimes	404.5	387.1	387.8	369.1	361.6	373.7	397.5	394.9	383.4	380.8	398.5	
Homicide	4.8	4.7	4.7	4.5	4.4	4.9	5.4	5.3	5	5.1	6.5	
Rape				35.9	37	39.3	40.9	41.7	44	43.6	38.4	
Robbery	119.3	113.9	113.1	109	101.3	102.2	102.9	98.6	86.1	81.8	73.9	
Aggravated Assault	252.8	241.5	242.8	229.6	229.2	238.1	248.3	249.2	248.2	250.4	279.7	
Property Crime												
All Property Crimes	2945.9	2905.4	2868	2733.6	2574.1	2500.5	2451.6	2362.9	2209.8	2130.6	1958.2	
Arson	18.1	17.5	17.6	14.9	14.5	13.8	14.2	13.2	12.1	10.9	13.2	
Burglary	701	701.3	672.2	610.5	537.2	494.7	468.9	429.7	378	340.5	314.2	
Larceny-theft	2005.8	1974.1	1965.4	1901.9	1821.5	1783.6	1745.4	1695.5	1601.6	1569.2	1398	
Motor vehicle theft	239.1	230	230.4	221.3	215.4	222.2	237.3	237.7	230.2	220.8	246	

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Quarterly Program Participation and Fundraising Goal Updates

This dashboard displays our company's progress toward our program participation and fundraising goals at the beginning of the 4th quarter.

Program Participation Goals

	Year-to-Date Progress	Year-End Goal	Goal Achieved	% of Goal Achieved	
Parenting Class	456	400	■	114%	
Trauma 101	584	600	☐	97%	
Financial Literacy	156	500	☐	31%	
Budgeting 101	356	400	☐	89%	
Pregnancy Yoga	245	250	☐	98%	
Total	**1797**	**2150**	☐	**84%**	

Fundraising Goals

	Year-to-Date Progress	Year-End Goal	Goal Achieved	% of Goal Achieved	
Individual Donors	$ 2,134.00	$ 2,000.00	■	107%	
Bake Sale	$ 2,723.00	$ 5,000.00	☐	54%	
Gala	$ 19,253.00	$ 20,000.00	☐	96%	
Walk-a-thon	$ 8,394.00	$ 8,000.00	■	105%	
Grants	$ 56,782.00	$ 50,000.00	■	114%	
Total	**$ 89,286.00**	**$ 85,000.00**	■	**105%**	

Previous Year Program Participation and Fundraising Updates

This dashboard displays our program participation and fundraising numbers for the previous year.

Program Participation

	Q1	Q2	Q3	Q4	Quarterly Trends	Year-End Totals
Parenting Class	456	400	398	350		1604
Trauma 101	584	600	600	621		2405
Financial Literacy	156	156	156	156		624
Budgeting 101	356	400	421	500		1677
Pregnancy Yoga	245	250	235	260		990
Total	**1797**	**1806**	**1810**	**1887**		7300

Fundraising

	Q1	Q2	Q3	Q4	Quarterly Trends	Year-End Totals
Individual Donors	$ 2,134.00	$ 2,000.00	$5,000.00	$2,153.00		$11,287.00
Bake Sale	$ 2,723.00	$ 2,000.00	$ 2,100.00	$ 1,500.00		$ 8,323.00
Special Events	$ 8,000.00	$12,000.00	$ 5,000.00	$ 4,000.00		$29,000.00
Grants	$ 8,000.00	$ 9,000.00	$12,000.00	$15,000.00		$44,000.00
Total	**$20,857.00**	**$25,000.00**	**$24,100.00**	**$22,653.00**		$92,610.00

Program Participation and Fundraising in 2022 and 2023

This dashboard displays whether we have improved in the areas of program participation and fundraising between 2022 and 2023.

Program Participation

	2022	2023	Improved	Difference	
Parenting Class	456	400	☐	-56	
Trauma 101	584	600	■		16
Financial Literacy	156	500	■		344
Budgeting 101	356	400	■		44
Pregnancy Yoga	245	250	■		5
Total	**1797**	**2150**	■		

Fundraising

	2022	2023	Improved	Difference	
Individual Donors	$ 2,134.00	$ 2,000.00	☐	-134	
Bake Sale	$ 2,723.00	$ 5,000.00	■		2,277
Gala	$ 19,253.00	$ 20,000.00	■		747
Walk-a-thon	$ 8,394.00	$ 8,000.00	☐	-394	
Grants	$ 56,782.00	$ 50,000.00	☐	-6,782	
Total	**$ 89,286.00**	**$ 85,000.00**	☐		

Additional Notes

- The presented data visualizations are examples of the work I can do for you. This is not an exhaustive list.

- If your company has a style guide, I can adjust any data visualizations to follow its guidelines.

- Data visualizations will be individualized based on the data and project.

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