

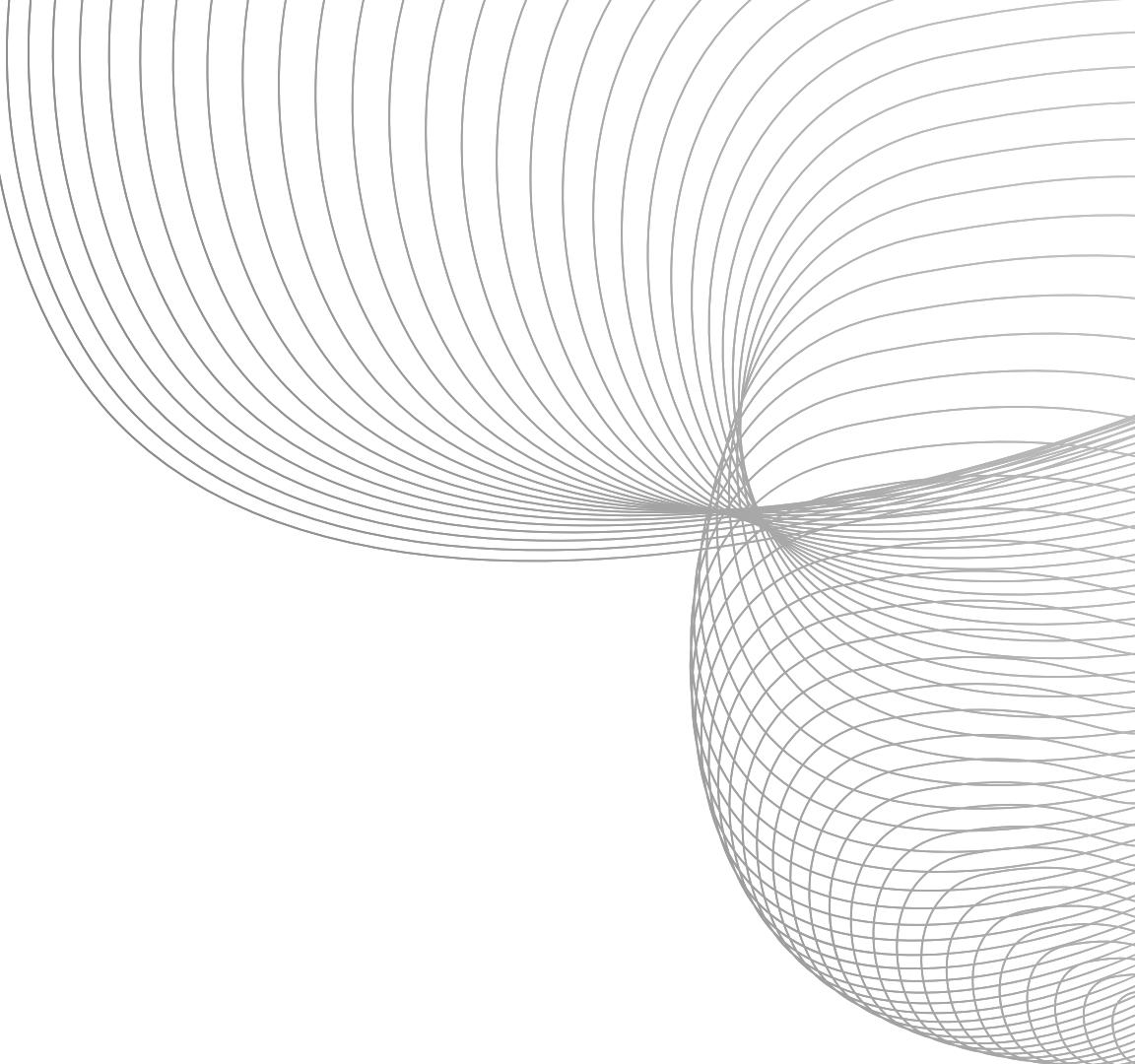
HCCPP

Hackathon 2024

Save the kids

Task at hand

- WHATS THE CORRELATION BETWEEN SOCIOECONOMIC FACTORS AND MISSING CHILDREN?
- HOW CAN WE USE THIS DATA TO HELP FIND MISSING CHILDREN?



Research

- First, how are missing kids usually found today?
- Can we increase the chances of finding kids theseways using the data sets found/provided?
- Shocking discoveries about how many kids go missing

provided csv files

unemployment rates

missing persons data

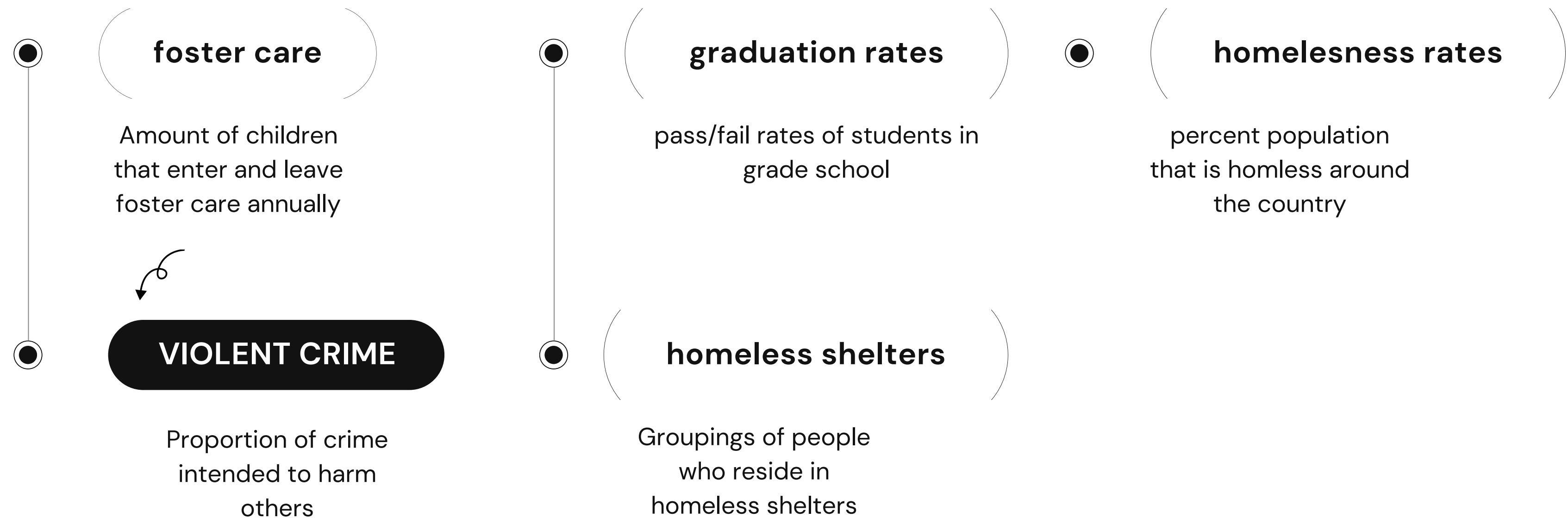
education data

first-responder data

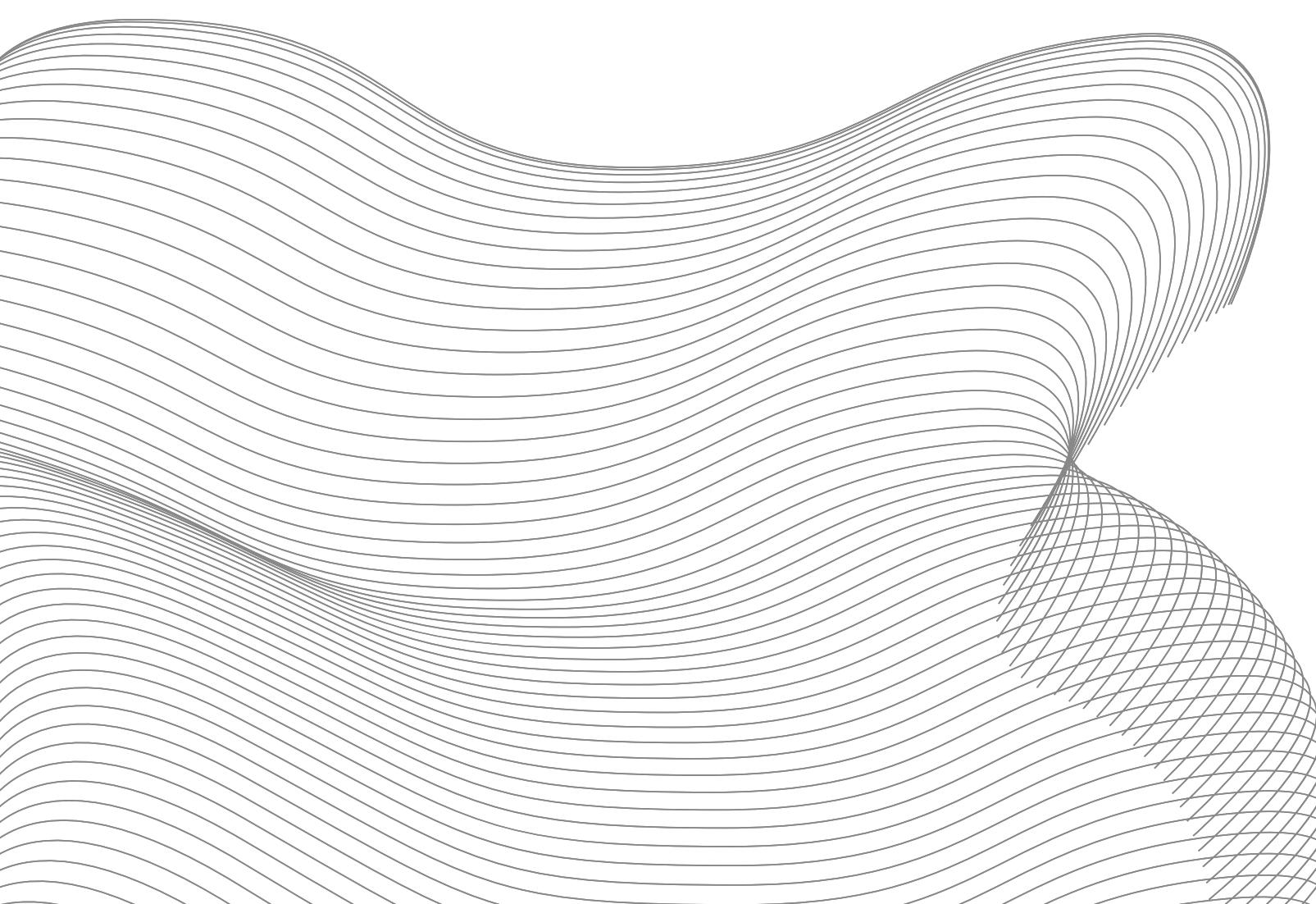
poverty estimates

volunteer data

extra csv files



Initial Assumptions

A large, abstract graphic on the left side of the slide consists of numerous thin, light gray lines that curve and overlap to create a sense of depth and motion, resembling waves or a stylized landscape.

- 01 Social Factors would correlate to child abduction
- 02 Education rates would directly correlate to crime rates
- 03 Effective analysis of larger datasets would lead to meaningful results

15%

OF PEOPLE UNDER THE AGE OF 18 LIVE
BELOW THE POVERTY LINE

via the US Census

	Total	Below poverty		Total	Below poverty		Total	Below poverty	
		Number	Percent		Number	Percent		Number	Percent
2022	330,100	37,920	11.5	71,950	10,780	15	200,200	21,240	10.6
2021	328,200	37,930	11.6	72,940	11,150	15.3	199,100	20,980	10.5
2020	327,600	37,550	11.5	73,540	11,790	16	199,800	20,910	10.5
2019	324,800	33,980	10.5	72,640	10,470	14.4	197,500	18,660	9.4
2018	323,800	38,150	11.8	73,280	11,870	16.2	197,800	21,130	10.7

State	Total, ACGR for all students									
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1	2	3	4	5	6	7	8	9	10	11
United States	79.6\%	80.6\%	81.7\%	82	83	84	85	85	86	87.8\%
Alabama\10\	72	75	80	86	89	87	89	90	92	91
Alaska	68	70	72	71	76	76	78	79	80	79
Arizona	78	76	75	76	77	80	78	79	78	77
Arkansas	81	84	85	87	85	87	88	89	88	89
California	76	79	80	81	82	83	83	83	85	84
Colorado	74	75	77	77	77	79	79	81	81	82
Connecticut	83	85	86	87	87	87	88	88	89	88
Delaware	78	80	80	87	86	86	87	87	89	89
District of Columbia	59	59	62	61	69	69	73	69	69	73
Florida	71	75	76	76	78	81	82	86	87	90
Georgia	67	70	72	73	79	79	81	82	82	84
Hawaii	80	81	82	82	82	83	83	85	85	86
Idaho	---	---	---	77	79	80	80	81	81	82
Illinois	84	82	83	86	86	86	87	87	86	‡
Indiana	86	86	87	88	87	87	84	88	87	91
Iowa	88	89	90	91	91	91	91	91	92	92
Kansas	83	85	86	86	86	86	87	87	87	88
Kentucky	---	---	86	88	88	89	90	90	91	91
Louisiana	71	72	74	75	78	79	78	81	80	83
Maine	84	85	86	87	88	87	87	87	87	87
Maryland	83	84	85	86	87	88	88	87	87	87
Massachusetts	83	85	85	86	87	88	88	88	88	89
Michigan	74	76	77	79	80	80	80	81	81	82
Minnesota	77	78	80	81	82	82	83	83	84	84
Mississippi	75	75	76	78	81	82	83	84	85	88
Missouri	81	84	86	87	88	89	88	89	90	90
Montana	82	84	84	85	86	86	86	86	87	86
Nebraska	86	88	89	90	89	89	89	89	88	88
Nevada	62	63	71	70	71	74	81	83	84	83
New Hampshire	86	86	87	88	88	88	89	89	88	88
New Jersey	83	86	88	89	90	90	91	91	91	91
New Mexico	63	70	70	69	69	71	71	74	75	77
New York	77	77	77	78	79	80	82	82	83	84
North Carolina	78	80	83	84	86	86	87	86	87	88
North Dakota	86	87	88	87	87	88	87	88	88	89
Ohio	80	81	82	82	81	84	84	82	82	84
Oklahoma	---	---	85	83	83	82	83	82	85	81
Oregon	68	68	69	72	74	75	77	79	80	83
Pennsylvania	83	84	86	85	85	86	87	86	87	87
Rhode Island	77	77	80	81	83	83	84	84	84	84

98%
OF STATES WITH RISING GRADUATION
RATES FROM 2010–2019

	Week to Date			28 Day			Year to Date*		
	2024	2023	% Chg	2024	2023	% Chg	2024	2023	% Chg
Murder	3	6	-50	22	28	-21.4	42	55	-23.6
Rape	29	37	-21.6	104	114	-8.8	171	214	-20.1
Robbery	272	322	-15.5	1,214	1,169	3.8	2,182	2,082	4.8
Fel. Assault	536	499	7.4	1,957	1,875	4.4	3,372	3,347	0.7
Burglary	251	287	-12.5	971	1,113	-12.8	1,686	2,023	-16.7
Gr. Larceny	765	869	-12	3,701	3,612	2.5	6,314	6,378	-1
G.L.A.	246	270	-8.9	1,009	1,123	-10.2	1,803	1,941	-7.1
TOTAL	2,102	2,290	-8.21	8,978	9,034	-0.62	15,570	16,040	-2.93
Transit	52	51	2	175	169	3.6	317	268	18.3
Housing	114	109	4.6	425	446	-4.7	760	792	-4
Petit Larceny	1,995	2,048	-2.6	8,329	8,173	1.9	14,076	14,124	-0.3
Misd. Assault	870	764	13.9	3,357	3,045	10.2	5,609	5,247	6.9
UCR Rape*	47	56	-16.1	171	191	-10.5	296	340	-12.9
Other Sex Crimes	83	81	2.5	375	343	9.3	621	626	-0.8
Shooting Vic.	16	18	-11.1	67	80	-16.3	121	148	-18.2
Shooting Inc.	9	16	-43.8	54	66	-18.2	99	122	-18.9
Hate Crimes	2	9	-77.8	31	32	-3.1	55	57	-3.5

2 . 93%

DECREASE IN TOTAL REPORTED VIOLENT
CRIME IN NEW YORK

<i>State</i>	<i>Agency Type</i>	<i>Agency Name</i>	<i>Population</i> ¹	<i>Total Offenses</i>	<i>Crimes Against Persons</i>	<i>Crimes Against Property</i>	<i>Crimes Against Society</i>

5000 lines
of data

BROKEN DOWN BY CITY, TRIBAL STATE, AND COUNTIES

State	Agency Type	Agency Name	Population ¹	Crimes Against Persons																				Crimes Against Property										
				Total Offenses	Crimes Against Persons	Crimes Against Property	Crimes Against Society	Assault Offenses	Aggravated Assault	Simple Assault	Intimidation	Homicide Offenses	Murder and Nonnegligent Manslaughter	Negligent Manslaughter	Justifiable Homicide	Human Trafficking Offenses	Commercial Sex Acts	Involuntary Servitude	Kidnapping/Abduction	Sex Offenses	Rape	Sodomy	Fondling	Statutory Rape	Incest	Burglary/Breaking & Entering	Arson	Bribery	Embezzlement	Forgery	Larceny	Robbery	Theft	
ARIZONA	Cities	Anache Junction	41,245	2,306	525	1,280	501	442	65	320	57	0	0	0	0	0	0	11	72	0	0	5	0	109	0	0	0	0	0	0	0	0		
		Gilbert	247,463	10,685	1,814	6,262	2,609	1,553	127	1,083	343	2	2	0	0	0	0	0	57	202	73	2	0	93	0	34	16	0	0	407	0	0		
		Wellton	3,003	123	24	58	41	16	2	13	1	3	3	0	0	0	0	0	1	4	0	1	0	2	0	1	0	0	0	0	13			
		Yuma	96,121	6,740	1,261	3,966	1,513	1,102	394	591	117	9	9	0	0	0	0	0	26	124	36	1	0	60	0	27	18	0	0	416	0	0		
	Metropolitan Counties	Yuma	62,335	2,988	704	1,829	455	631	111	456	64	14	11	3	0	0	0	0	16	43	13	4	0	20	0	6	5	1	0	320	0	0		
ARKANSAS	Cities	Alexander	3,078	256	72	118	66	66	12	20	34	2	2	0	0	0	0	0	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	20
		Alma	5,772	698	239	377	82	218	25	106	87	0	0	0	0	0	0	0	9	12	5	7	0	0	0	0	0	0	0	0	0	0	0	37
		Altus	735	72	7	17	48	6	0	4	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	5	
		Amity	678	36	16	12	8	16	3	12	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
		Arkadelphia	10,647	674	192	433	49	179	29	111	39	0	0	0	0	0	0	0	1	12	3	9	0	0	0	0	0	0	0	0	0	0	44	
		Ashdown	4,389	300	61	169	70	56	10	44	2	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	25	
		Ash Flat	1,090	40	10	26	4	10	2	3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
		Atkins	3,041	243	41	126	76	37	2	30	5	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	19	
		Austin	3,508	86	20	41	25	18	3	11	4	0	0	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	14	
		Bald Knob	2,879	335	96	182	57	91	8	63	20	0	0	0	0	0	0	0	2	3	1	2	0	0	0	0	0	0	0	0	0	0	28	
		Barling	4,972	564	93	137	334	86	18	44	24	0	0	0	0	0	0	0	1	6	2	4	0	0	0	0	0	0	0	0	0	0	14	
		Batesville	10,782	836	121	480	235	109	31	47	31	0	0	0	0	0	0	0	1	11	7	4	0	0	0	0	0	0	0	0	0	0	50	
		Bay	1,806	76	8	28	40	7	0	0	7	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	4		
		Beebe	8,268	710	115	387	208	107	21	62	24	0	0	0	0	0	0	0	1	7	3	4	0	0	0	0	0	0	0	0	0	0	43	
		Bella Vista	28,798	739	169	326	244	143	30	56	57	0	0	0	0	0	0	0	1	25	9	16	0	0	0	0	0	0	0	0	0	0	30	
		Benton ²	36,556	707	432	670	142	240	288	1	1	0	0	0	0	0	0	0	7	29	16	1	0	9	0	0	0	0	0	0	0	0	0	0
		Bentonville	51,607	2,217	477	1,130	610	412	73	128	211	0	0	0	0	0	0	0	11	54	21	7	0	26	0	0	2	0	0	0	0	0	0	112
		Berrvile	5,470	411	64	278	69	56	6	41	9	0	0	0	0	0	0	0	0	8	5	2	0	1	0	0	1	0	0	0	0	0	0	51
		Bethel Heights	2,825	192	15	24	153	13	1	12	0	0	0	0	0	0	0	0	2	1	0	0	1	0	0	0	0	0	0	0	0	0	4	
		Blytheville	13,843	2,139	715	1,217	207	695	111	235	349	7	6	1	0	0	0	0	1	12	3	1	0	4	0	0	0	0	0	0	0	0	117	
		Bono	2,405	161	41	53	67	33	13	7	13	0	0	0	0	0	0	0	0	8	2	6	0	0	0	0	0	0	0	0	0	0	11	
		Booneville	3,837	269	77	135	57	73	1	63	9	0	0	0	0	0	0	0	0	4	3	1	0	0	0	0	0	0	0	0	0	0	0	19
		Bradford	742	79	18	37	24	17	3	6	8	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	
		Brinkley	2,658	442	157	219	66	151	34	82	35	1	1	0	0	0																		

What we learned

THE ANALYSIS:

Simpler analysis in normalized databases is more effective than brute forcing data.

CORRELATIONS:

There's very little correlation between the socioeconomic factors we analyzed and missing children.

Solution

**FINDING THE
CHILDREN:**

Tackling the issue uniquely in every location, as analyzed by both our data solutions combined

**ENGAGING THE
COMMUNITY:**

Innovating existing solutions such as the amber alert system.

Building Further

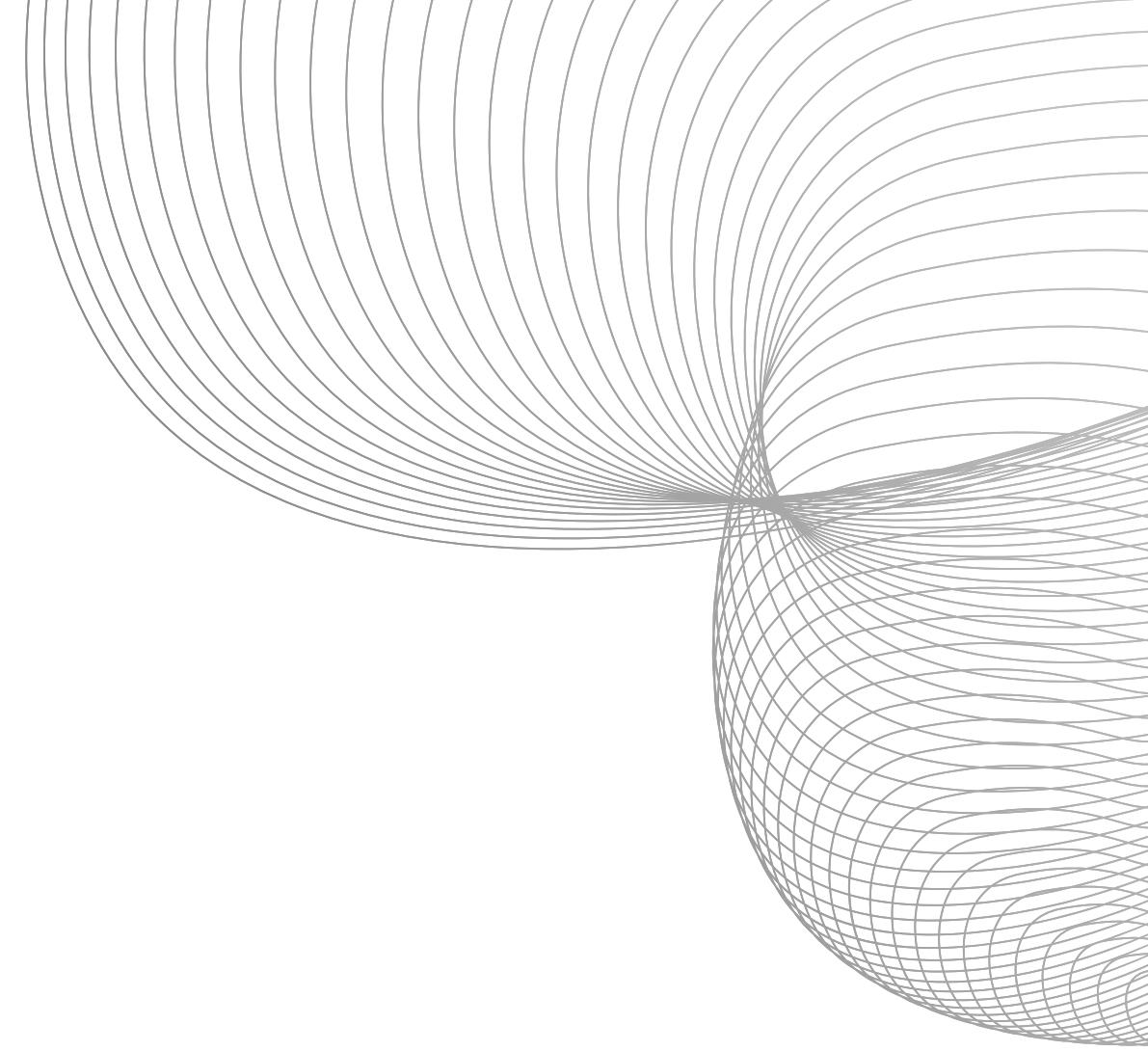
WHAT WE WANT TO ACHIEVE IF GIVEN MORE TIME

IMPLEMENT VISUALIZATIONS WITH ECL

Present with ease and wow any audience with Canva Presentations. Choose from over a thousand professionally-made templates to fit any objective or topic. Make it your own by customizing it with text and photos.

PROVIDE INFORMATION TO NECMEC

We would refactor our datasets to become more aligned with your given datasets. That would allow for us to better establish clear causation in certain areas.





Questions?

Thank you !