

# BACK TO SCHOOL

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# PROJECT STATEMENT

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As Columbus becomes a larger metropolitan city, there still seems to be a disparity in the quality of public school education. Franklin County has 16 school districts, we will look to see if location, socio-economic issues, and teacher's qualifications affect a school district's performance. Our visualization will explore what factors impact a students performance the most.



# OUR COLLABORATION

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## Sprint 0

(March 27th - March 29th)

Problem statement formulation - Team  
Explore data - Team

## Sprint 1

(April 3rd - April 5th)

Finalize data set - Matt, Mandy, Brad  
Generate User Flow - Mandy  
Prototype visualization in Illustrator - Mandy  
Look into D3 map components - Anriudh, Ashwini

## Sprint 2

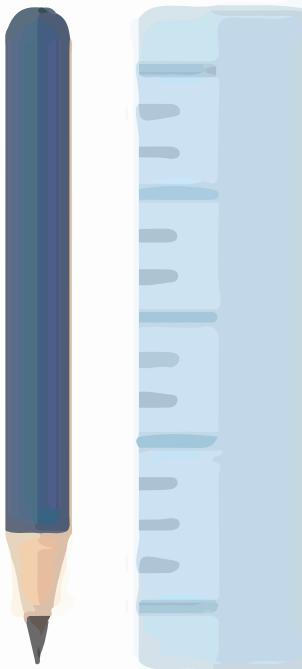
(April 10th - 19th)

D3 prototype Radial Bar chart - Brad  
Interactive legend - Matt  
Heat map - Ashwini, Anriudh  
Begin documentation - Mandy

## Sprint 3

(April 24 - 28th)

Finalize D3 components - CSE Students  
User testing - Mandy  
Finalize report - Team



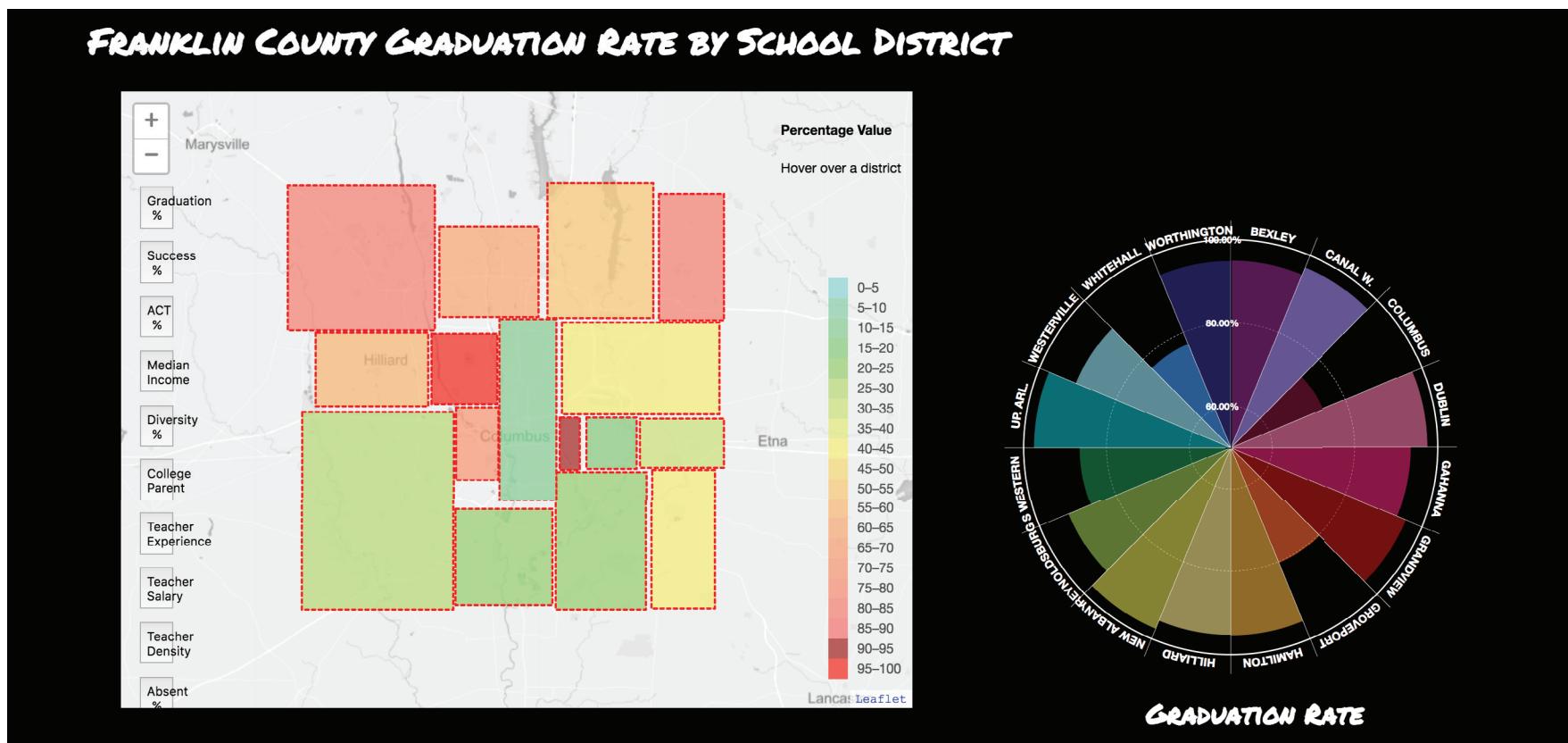
# DATA INFO

We used data from the 16 school districts in Columbus including teacher, socioeconomic factors, and curriculum information to compare their effects on the graduation rates of each district.

School District	Prepared for Success Student Percent	Chronic Absentism in percent	Percent ACT/SAT Remediation Free	Median Income	Diversity (%)	PCTCOLL	Teacher Experience	Average Teacher Salary	# of general education teachers per 1k student	4 yr grad (%)
BEXLEY CSD	0.916	0.051	0.706	74103	0.14	0.742	14	75009	49.23	0.91
CANAL WINCHESTER LSD	0.416	0.106	0.288	47642	0.32	0.353	12	55513	45.96	0.96
COLUMBUS CSD	0.147	0.378	0.087	29943	0.72	0.314	10	67308	48.4	0.74
DUBLIN CSD	0.846	0.088	0.67	59074	0.16	0.625	11	77439	46.25	0.97
GAHANNA JEFFERSON CSD	0.446	0.068	0.347	53231	0.34	0.478	10	66353	42.54	0.93
GRANDVIEW HEIGHTS CSD	0.707	0.066	0.641	56283	0.07	0.701	14	76209	54.49	0.95
GROVEPORT-MADISON LSD	0.23	0.173	0.146	32667	0.53	0.169	9	57640	42.68	0.80
HAMILTON LSD	0.238	0.13	0.178	31466	0.2	0.085	10	64835	44.4	0.95
HILLIARD CSD	0.573	0.081	0.457	54341	0.18	0.5	16	75842	43.41	0.95
NEW ALBANY-PLAIN LSD	0.839	0.091	0.644	77796	0.17	0.668	15	71490	44.15	0.97
REYNOLDSBURG CSD	0.32	0.116	0.184	37314	0.56	0.297	9	59462	37.01	0.92
SOUTH WESTERN CSD	0.28	0.18	0.13	35744	0.33	0.207	13	65477	40	0.86
UPPER ARLINGTON CSD	0.952	0.062	0.756	77649	0.08	0.734	15	81475	52.04	0.97
WESTERVILLE CSD	0.511	0.087	0.411	47798	0.38	0.485	8	65799	41.66	0.90
WHITEHALL CSD	0.169	0.238	0.106	25090	0.68	0.106	7	57958	42.08	0.71
WORTHINGTON CSD	0.637	0.071	0.511	54002	0.25	0.573	16	73556	45.98	0.94

# FINAL VISUALIZATION

<https://bpershon.github.io/>



# USER TESTING RESULTS

	User 1 Difficulty of task	User 2 Difficulty of task	User 3 Difficulty of task	User 4 Difficulty of task
Click on % Diversity on the legend.	1	1	1	1
Click on Westerville Schools and Columbus City Schools.	5	4	4	3
Note which district has a higher diversity rate.	4	3	3	2
Compare Westerville and Columbus graduation rates on graph	4	4	3	2
Note which has a higher graduation rate.	3	3	2	1
Comments?	no	N/A	Hard to tell which district is which	are districts perfect rectangles?

The users had some difficulty overall with deciphering the name of each district on the map. The comments reflect the uncertainty of if they were doing the map tasks correctly. Given more time, we would focus on adding more district labels to the map.

Average difficulty

Task 1: 1.0

Task 2: 4.0

Task 3: 3.0

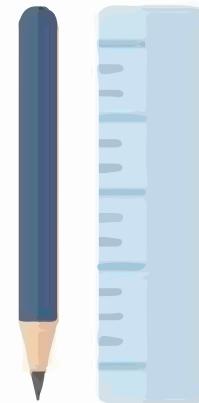
Task 4: 3.25



# CONCLUSION

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This tool can be used for school districts in Columbus to see if there are factors in the education system that can be improved upon to increase overall graduation rate. Some factors, such as median income, cannot really be changed by the school district, but may be correlated to the graduation rate.



THANK YOU!