

Analyzing impacts of gentrification on education in Oakland, CA

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CEWA 599 WQ 21

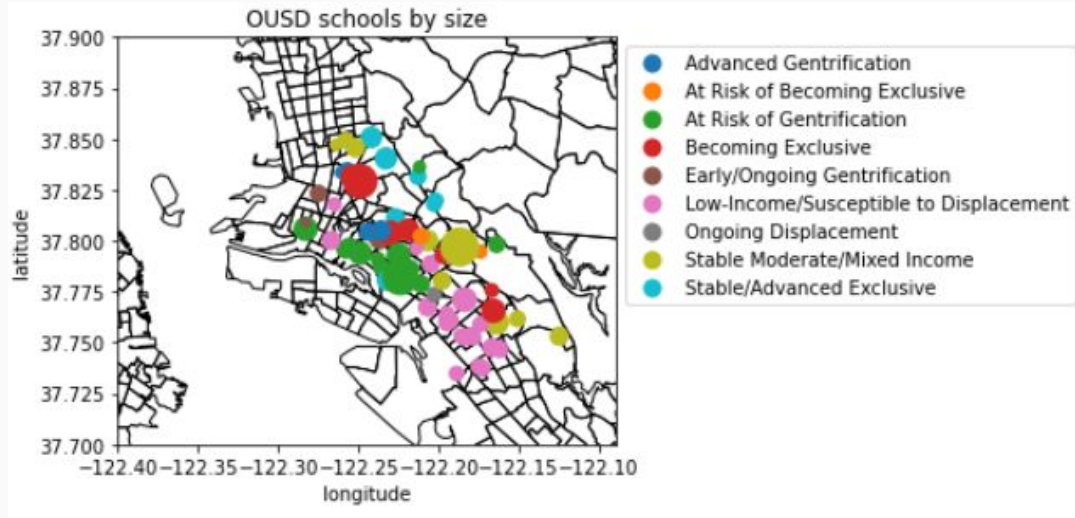
Background

- The Bay Area has experienced rapid gentrification in the past ten years with one third of poor neighborhoods experiencing some form of gentrification
- Oakland Unified School District is a highly diverse school district serving 35,000 students across a mosaic of campuses including public and charter schools.
- Urban Displacement Project data used to classify gentrification in Oakland and data from OUSD

Research Questions

- How has school enrollment demand changed across the study area?
- How have graduation rates changed across the study area?
- Has gentrification affected student mental health?

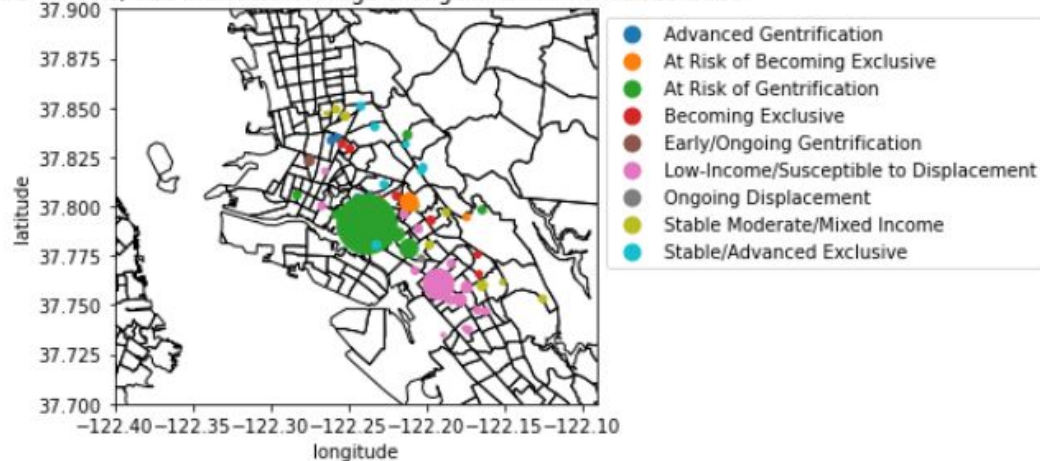
Oakland Schools



- 81 district public schools
- 43 district authorized charter schools
- Open enrollment where kids can choose what school to attend

OUSD schools by average change in enrollment 2015-2020

OUSD schools, size indicates average change in enrollment 2015-2020



- Not too much of a pattern among gentrification typologies
- Elementary schools had the biggest average changes

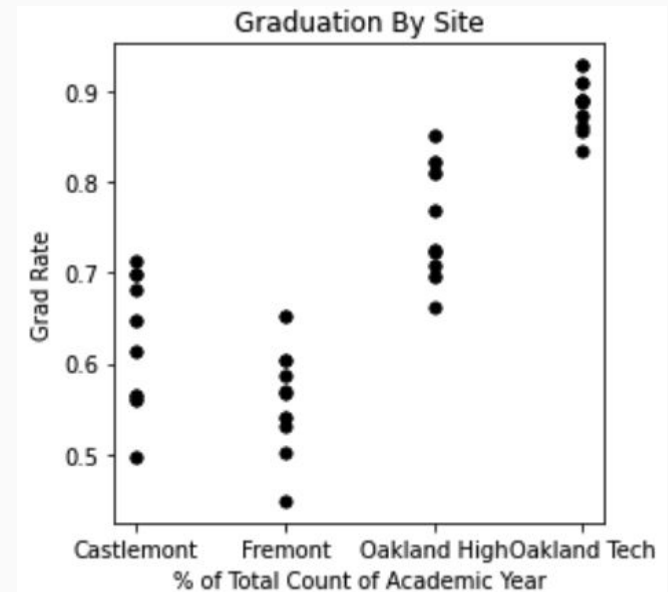
Where do our students come from?

Castlemont - “Low Income”

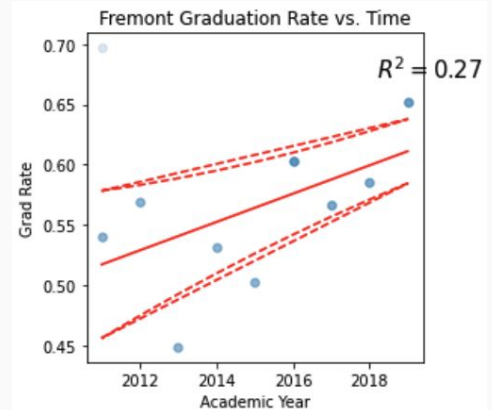
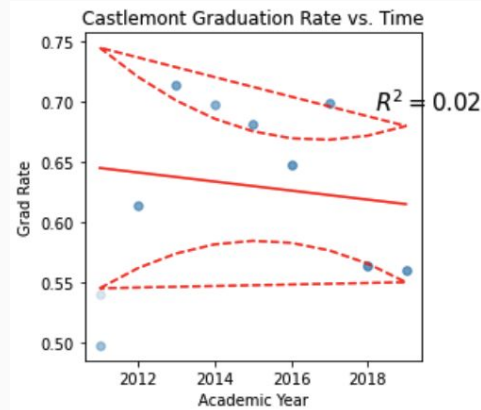
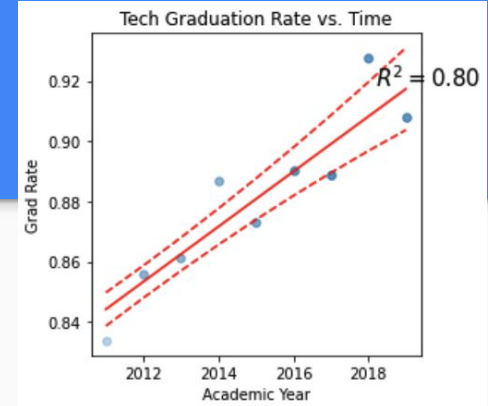
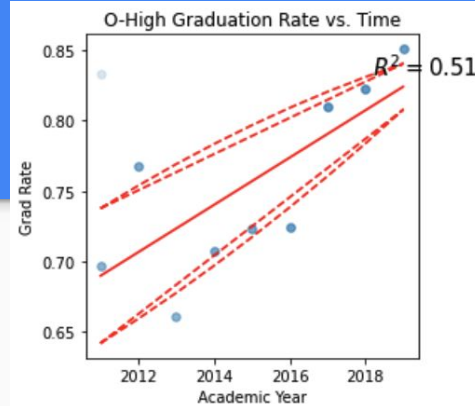
Oakland Tech - “Becoming Exclusive”

Oakland High - “At Risk of Gentrification”

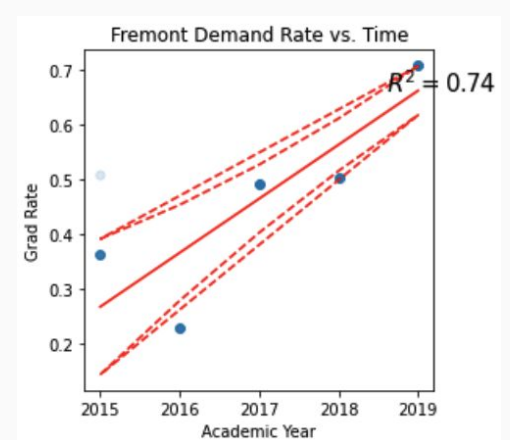
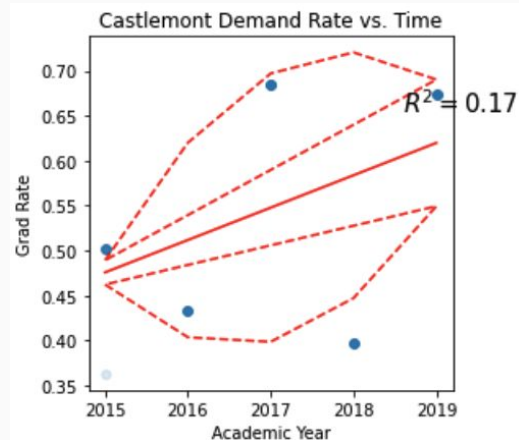
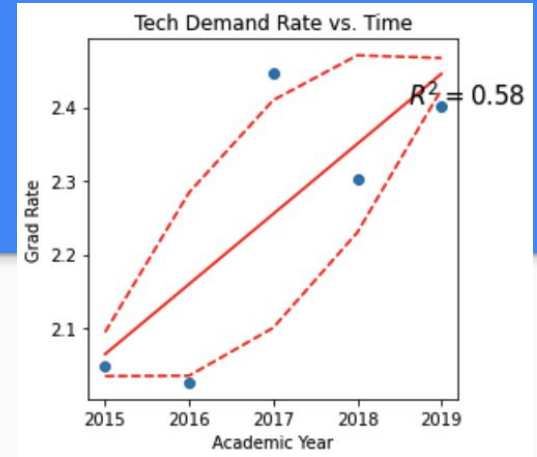
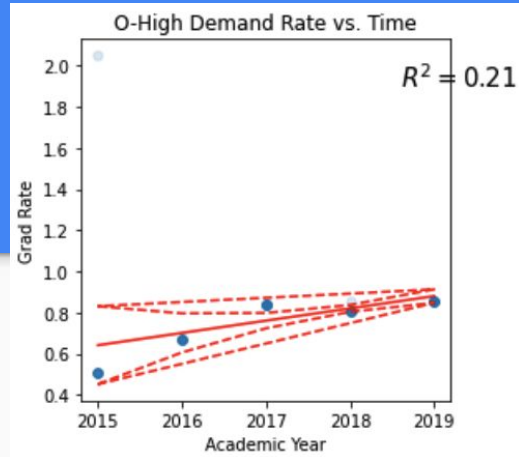
Fremont High - “Early Gentrification”



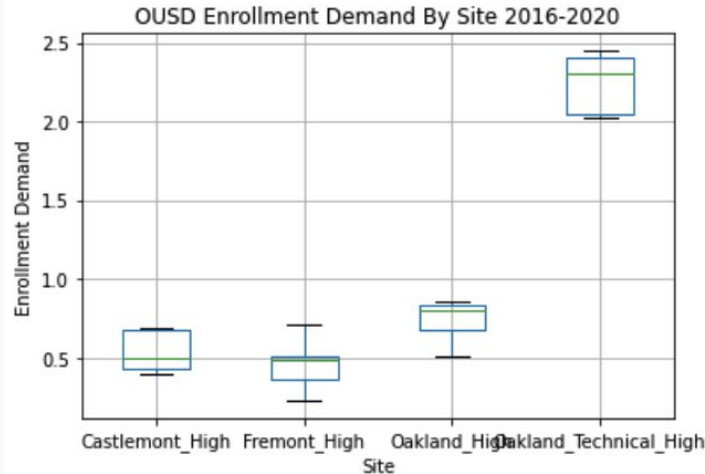
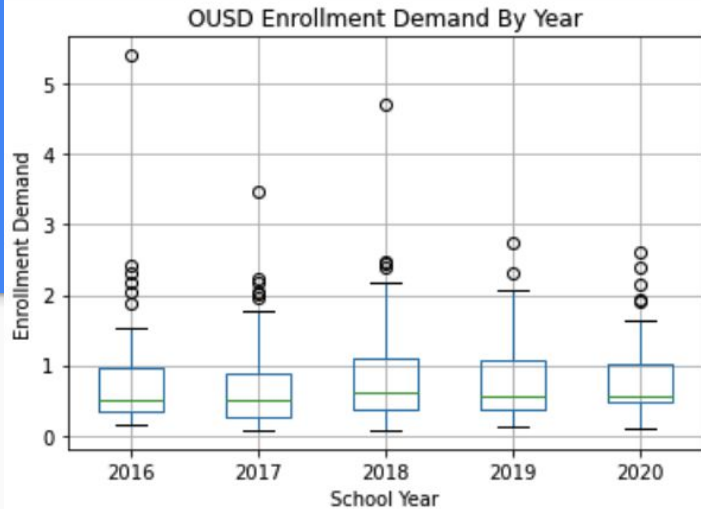
How have
graduation rates
changed over time?



How has enrollment demand changed over time?



Can we use ANOVA to quantify inequity?



H_0 : All groups have the same central mean

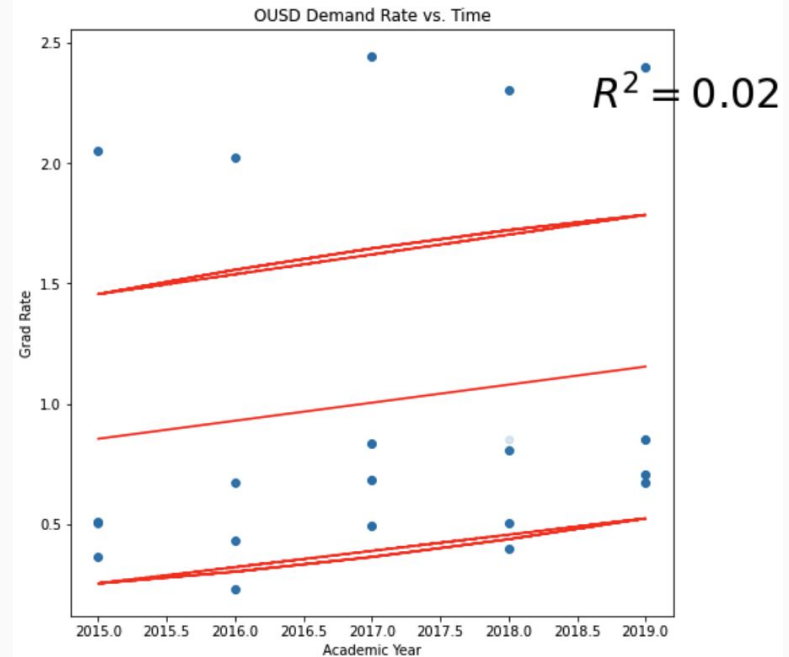
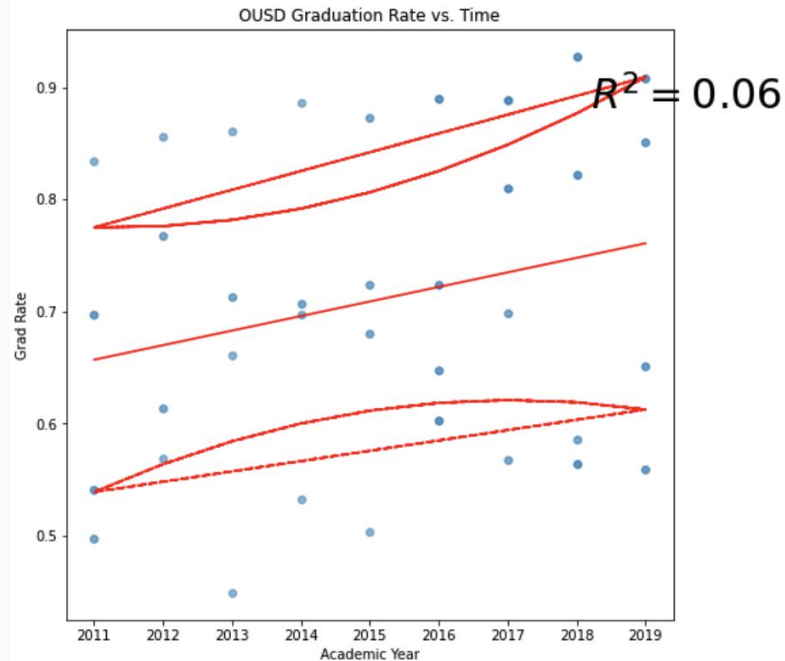
H_1 : The means are different from each other

We want 95% confidence, so choose $\alpha = 0.05$

Multiple Comparison of Means - Tukey HSD, FWER=0.05

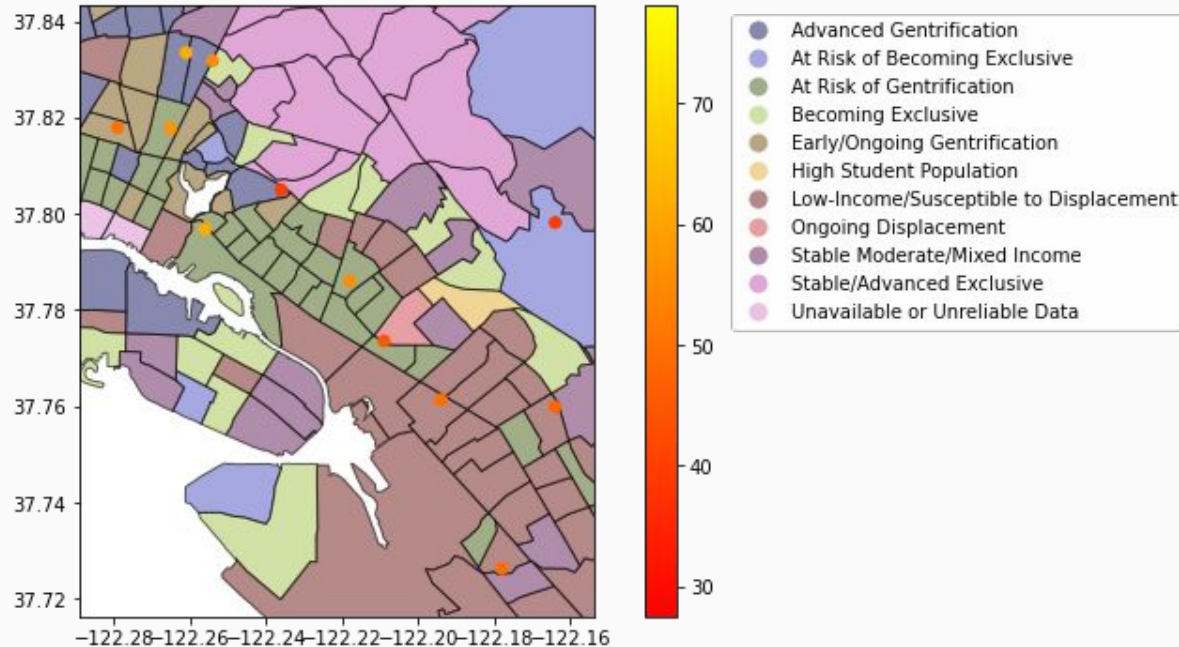
group1	group2	meandiff	p-adj	lower	upper	reject
Castlemont_High	Fremont_High	-0.0788	0.8646	-0.3782	0.2206	False
Castlemont_High	Oakland_High	0.1978	0.2708	-0.1016	0.4972	False
Castlemont_High	Oakland_Technical_High	1.7072	0.001	1.4078	2.0066	True
Fremont_High	Oakland_High	0.2766	0.0755	-0.0228	0.576	False
Fremont_High	Oakland_Technical_High	1.786	0.001	1.4866	2.0854	True
Oakland_High	Oakland_Technical_High	1.5094	0.001	1.21	1.8088	True

How do trends look across the district?



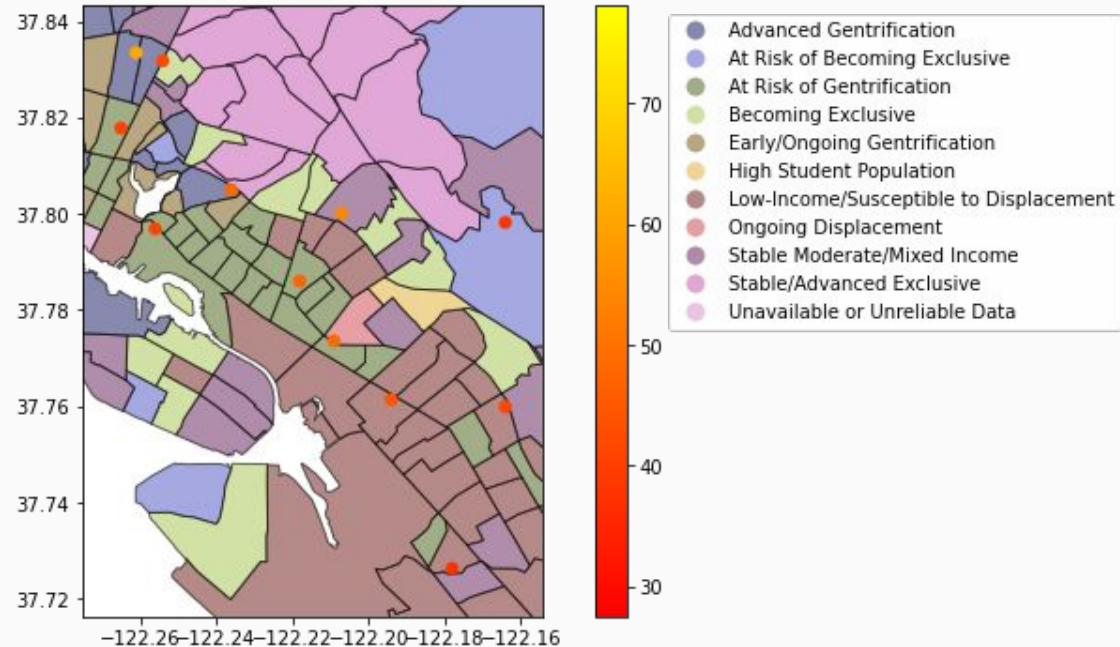
Sense of belonging in high schools

2015-16 percent Agree or Strongly Agree with the statement 'I feel like I am part of this school.'



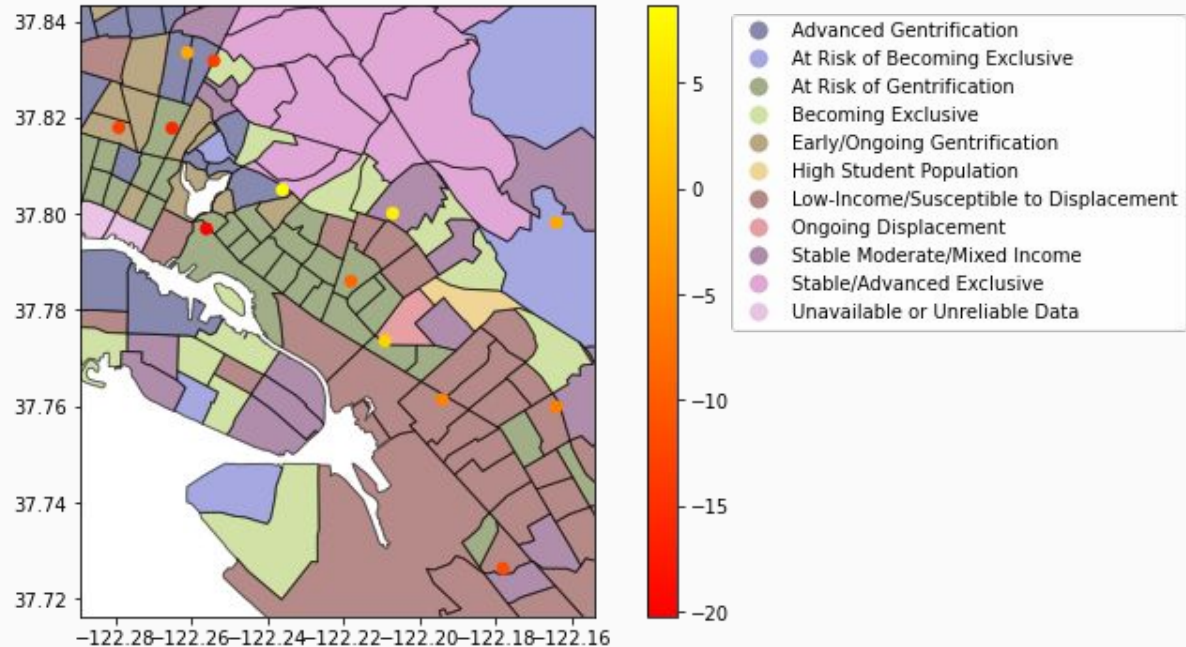
Sense of belonging in high schools

2019-20 percent Agree or Strongly Agree with the statement 'I feel like I am part of this school.'



Sense of belonging in high schools

Change in percent agree or strongly agree with 'I feel like I am part of this school.' from first to last year



Sense of belonging in high schools

- Hard to see any substantial patterns
 - Maybe a trend of a higher sense of belonging closer to exclusive areas
 - Really can't say much based on our limited data
- So many other factors that contribute to school belonging that may or may not be related to gentrification
 - Staff representation, school policies, etc.
 - Especially since Oakland is an open enrollment district

Conclusions

- Gentrification may have impacts on schools (change in funding, resources) but often times schools don't always reap the benefits, especially with open enrollment in OUSD.
- More research is needed to determine actual causes for change in enrollment and other variables