CS EDA and Exploring

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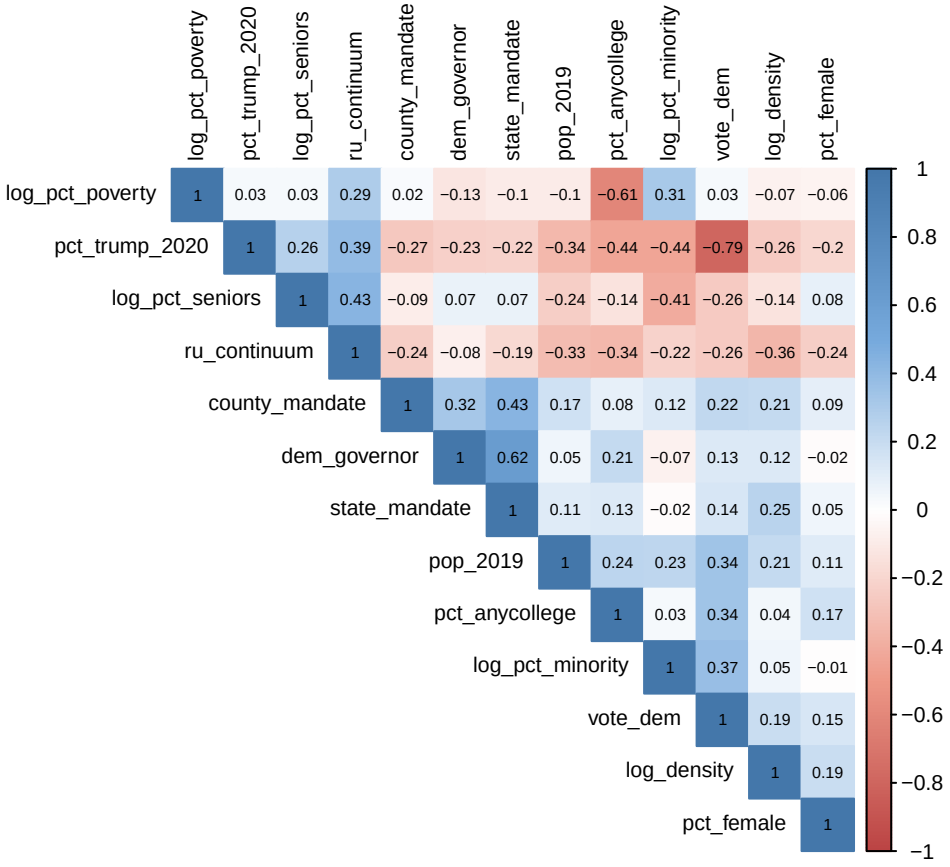
12/7/2020

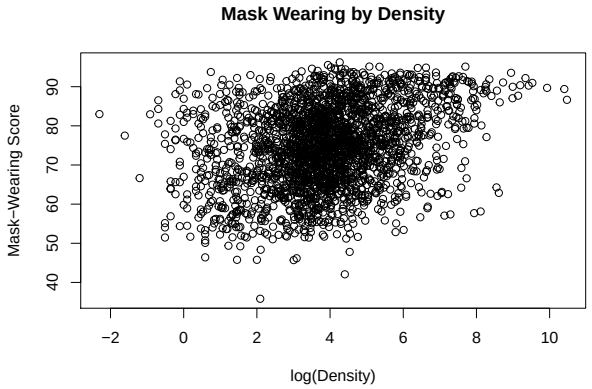
To predict mask usage in each county, we will use the predictors:

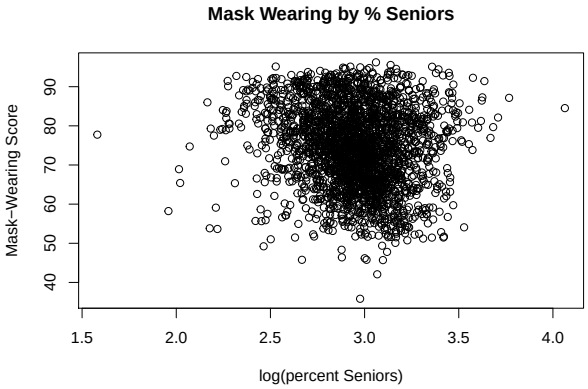
pop_2019: population in 2019
log_density: population density, log transformed
ru_continuum: discrete score from 1 to 10 on the rural-Urban continuum with 1 being the most urban
log_pct_seniors: percent of adults 65+ in 2019, log transformed
log_pct_minority: percent of people from minority backgrounds in 2019, log-transformed
log_pct_poverty: percent of people estimated to be living in poverty in 2018, log-transformed
pct_anycollege: percent of adults who attended at least some college in 2018
pct_female: percent of females in 2019
pct_trump2020: percent of votes for Trump in 2020 election
vote_dem: indicator of whether the majority of the county supported Biden in 2020 election
dem_governor: indicator of whether the county is in a state with a Democrat governor
state_mandate: indicator of whether the county is in a state with a state-wide mask mandate
county_mandate: indicator of whether the county has a county-wide mask mandate

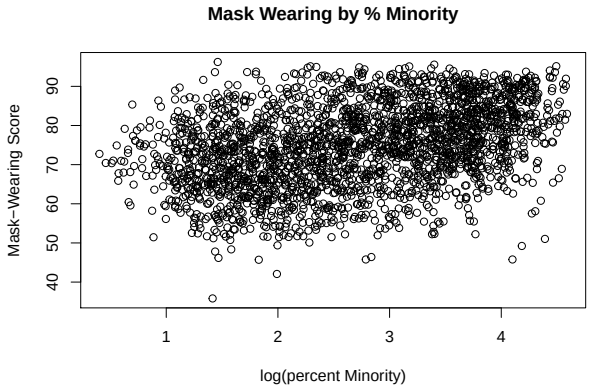


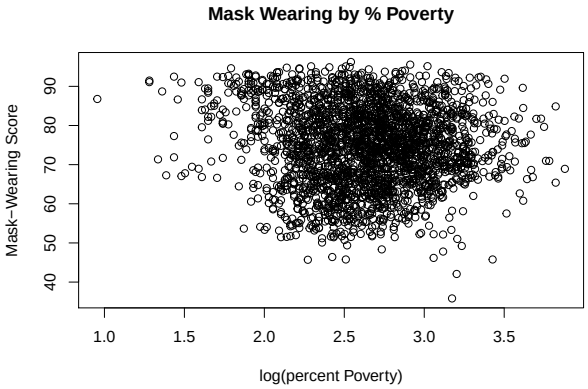
Demographic Characteristics:

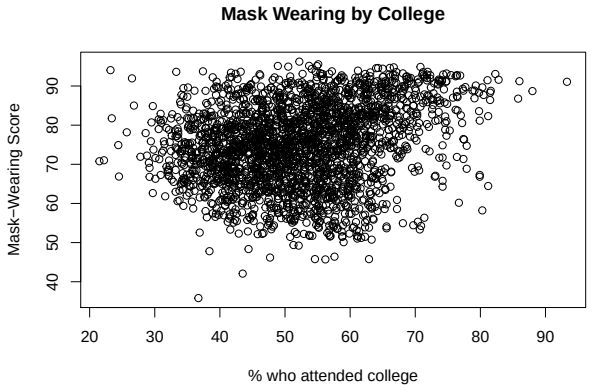
Plotting a few key predictors

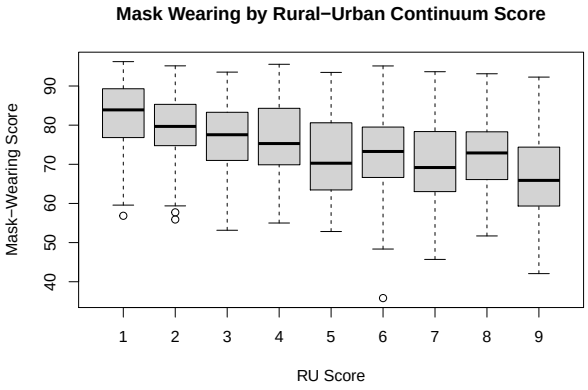




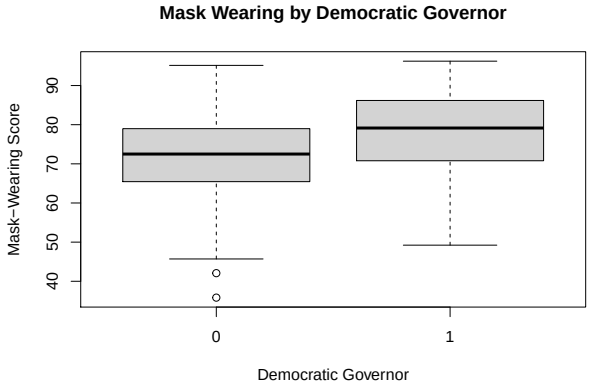


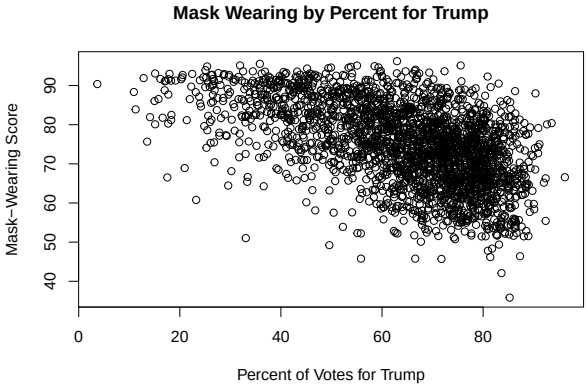




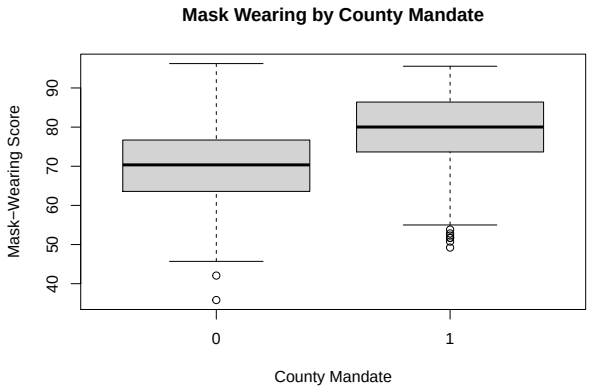


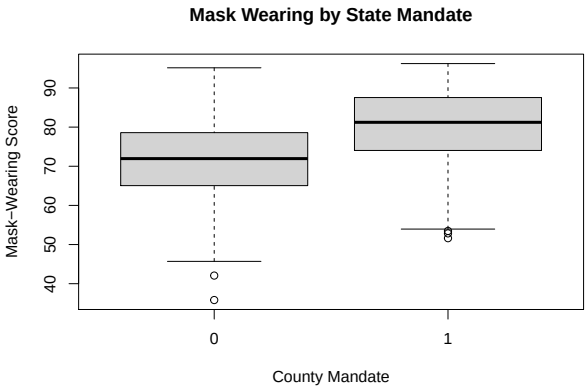
Political Leaning:





Policies:





There appears to be a difference between counties with and without a state mandate and with and without a county mandate. Are these statistically significant?

	No Mandate	Mandate	Difference	t-statistic	df	p-value
County Mandate	70.38	79.28	-8.91	-23.75	2406.74	0.00
State Mandate	71.56	80.04	-8.48	-21.58	1914.25	0.00

These are unbelievably significant. But is this difference really only due to a mandate, or are there confounders here? We will look more deeply into mask compliance by county based on a wealth of different factors, through the lens of trying to decide if mask wearing is political.

NEXT SECTION