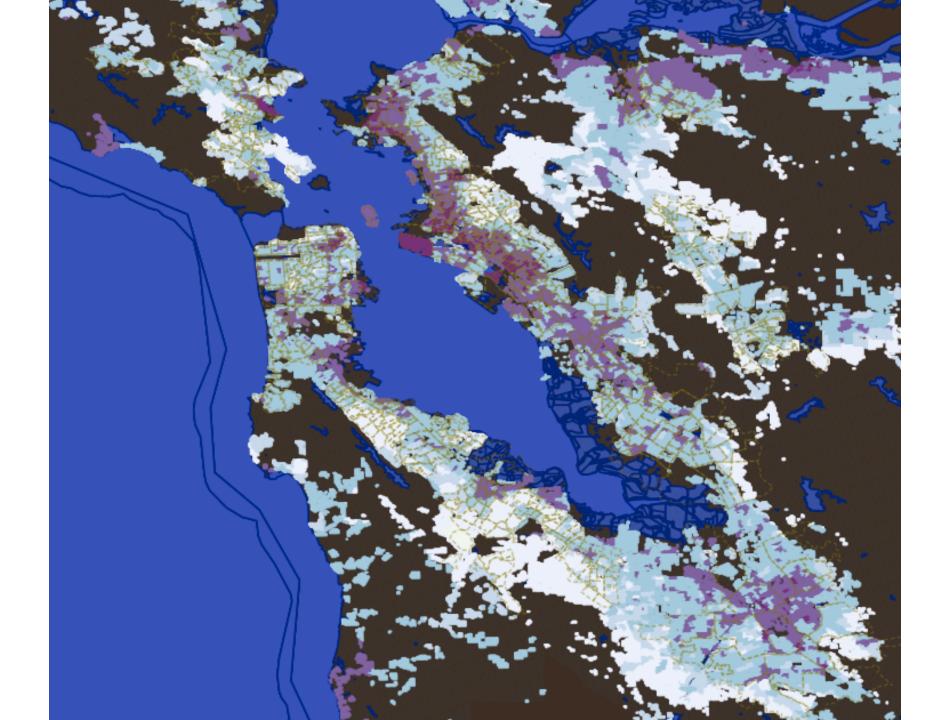
Exploring concepts from gentrification

Brian M. Hamlin

Sarah Quadri (CSU East Bay)

Kenneth Joseph (Carnegie Mellon Univ.)



150m Grid Base Data





UrbanFootprint 1.0 Data Dictionary

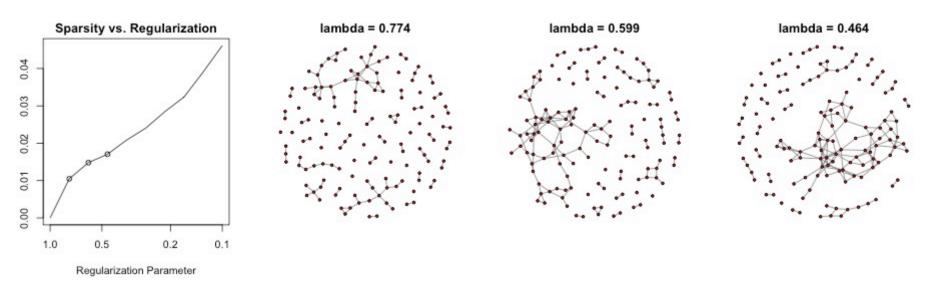
This UrbanFootprint-California (v1.0) Base/Existing Conditions Dataset
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contact:

engineer: Brian M Hamlin, maplabs@light42.com principal: Joe DiStefano joed@calthorpe.com

Variable Name	Definition
ID_Grid	Grid ID
County	County Name
Area Variables by Use and Landtype	
Parcel_SqFt	Parcel square feet
Acres_Grid	Grid cell acres (approx 5.55987)
Acres_Grid_Urban	Urban grid cell acres
Acres_Grid_GF	Greenfield grid field acres
Acres Grid Con	Constrained grid field acres (Note: These acres can be divided into any land coverage type of conser- farmland classes below, but it is anticipated that we will include habitat, carbon sequestration land

Understanding Census variable correlations

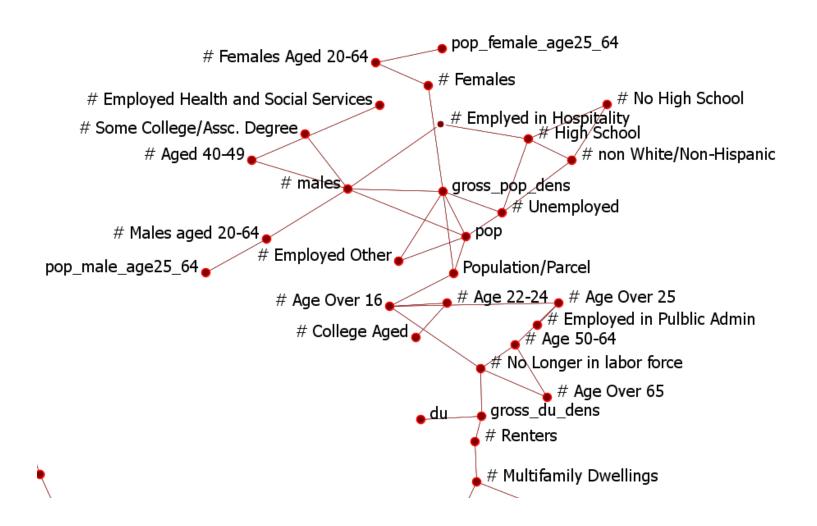


Use a nonparametric method developed for highdimensional data where d~n or d > n

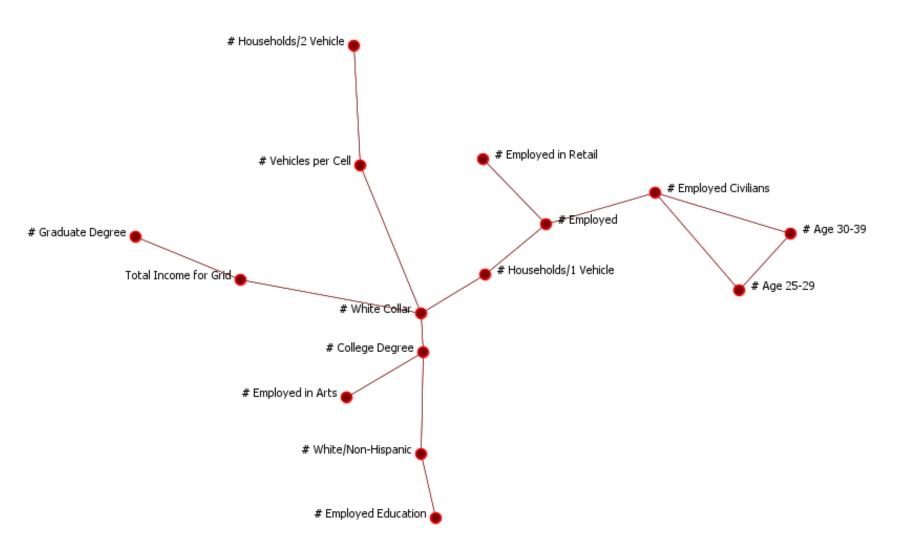
(560 neighborhoods, 200 census variables)

T. Zhao and H. Liu. The huge Package for High-dimensional Undirected Graph Estimation in R. Journal of Machine Learning Research, 2012

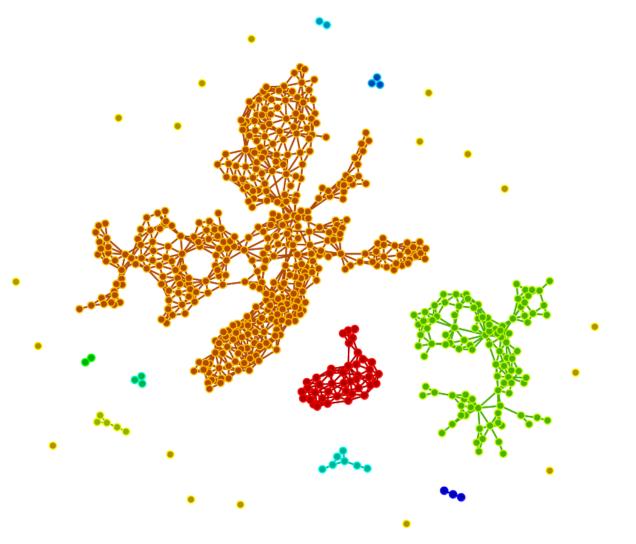
"Population variables"



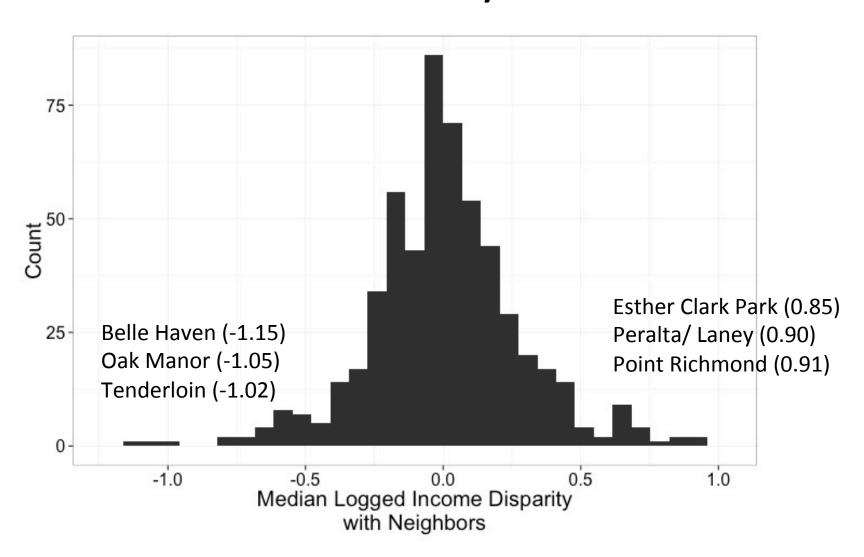
"Gentrification Variables"



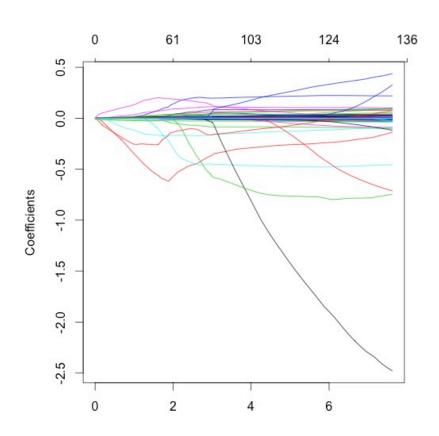
Understanding "Pushing out phemomena"

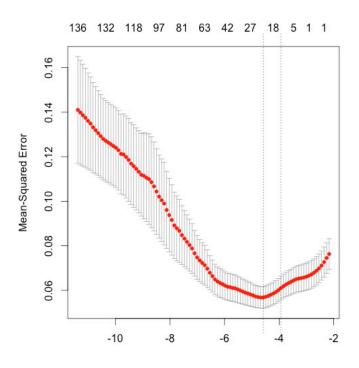


Nonparametric correlation graph discovery



Regression Results





Regression Results

du_occ_rate	-0.345
emp_ag	-0.255
pop_ind_extract	-0.117
pop_age20	-0.024
pop_ind_other	-0.015
hh_veh3p	0.007
pop_ind_public	0.008
hh_avg_veh	0.011
pop_ind_whole	0.011
hh_avg_size	0.013
emp_transware	0.016
pop_ind_util	0.035
pop_employed_af	0.132