

Appendix

Table A.1: Full set of variables included in the LASSO logistic regression model

Source	Variable name	Variable description
Census Planning Database 2013-2017 ACS Census Block Group Level	Census_Division	Census division (New England, Middle Atlantic, East North Central, West North Central, South Atlantic, East South Central, West South Central, Mountain, Pacific)
	Tot_Population_ACS_13_17	Total Population in the ACS 2013-2017
	Low_Response_Score	Score predicting that a block group will produce a low mail return rate
	pct_URBANIZED_AREA_POP_CEN_2010	Percentage of population living in an urbanized area (50,000 or greater) in the 2010 Census
	pct_URBAN_CLUSTER_POP_CEN_2010	Percentage of population living in an urban cluster area (2,500-49,999) in the 2010 Census
	pct_Males_ACS_13_17	Percentage of males in the ACS 2013-2017
	pct_Pop_under_5_ACS_13_17	Percentage of persons under age 5 in the ACS 2013-2017
	pct_Pop_5_17_ACS_13_17	Percentage of persons aged 5 to 17 in the ACS 2013-2017
	pct_Pop_18_24_ACS_13_17	Percentage of persons aged 18 to 24 in the ACS 2013-2017
	pct_Pop_25_44_ACS_13_17	Percentage of persons aged 25 to 44 in the ACS 2013-2017
	pct_Pop_45_64_ACS_13_17	Percentage of persons aged 45 to 64 in the ACS 2013-2017
	pct_Tot_GQ_CEN_2010	Percentage of persons living or staying in a group living arrangement in the Census 2010
	pct_Hispanic_ACS_13_17	Percentage of persons that identify as Hispanic in the ACS 2013-2017
pct_NH_White_alone_ACS_13_17	Percentage of persons that identify as non-Hispanic white alone in the ACS 2013-2017	

pct_NH_Blk_alone_ACS_13_17	Percentage of persons that identify as non-Hispanic black alone in the ACS 2013-2017
pct_NH_AIAN_alone_ACS_13_17	Percentage of persons that identify as non-Hispanic American Indian or Alaska Native in the ACS 2013-2017
pct_NH_Asian_alone_ACS_13_17	Percentage of persons that identify as non-Hispanic Asian alone in the ACS 2013-2017
pct_Othr_Lang_ACS_13_17	Percentage of persons speaking a language other than English at home in the ACS 2013-2017
pct_Not_HS_Grad_ACS_13_17	Percentage of the population aged 25 years and over that did not graduate high school in the ACS 2013-2017
pct_College_ACS_13_17	Percentage of the population aged 25 years and over with a college degree in the ACS 2013-2017
pct_Pov_Univ_ACS_13_17	Percentage of the population for whom poverty level is determined in the ACS 2013-2017
pct_Prs_Blw_Pov_Lev_ACS_13_17	Percentage of persons below the poverty level in the ACS 2013-2017
pct_One_Health_Ins_ACS_13_17	Percentage of the population with one health insurance type in the ACS 2013-2017
pct_TwoPHealthIns_ACS_13_17	Percentage of the population with two or more health insurance types in the ACS 2013-2017
pct_Diff_HU_1yr_Ago_ACS_13_17	Percentage of the population that moved from another residence within the last year in the ACS 2013-2017
pct_ENG_VW_SPAN_ACS_13_17	Percentage of Spanish speaking households that no one ages 14 years or over speak English "very well" in the ACS 2013-2017
pct_ENG_VW_INDOEURO_ACS_13_17	Percentage of Indo-European language households that no one ages 14 years or over speak English "very well" in the ACS 2013-2017

pct_ENG_VW_API_ACS_13_17	Percentage of Asian and Pacific Island language households that no one ages 14 years or over speak English "very well" in the ACS 2013-2017
pct_Rel_Family_HHD_ACS_13_17	Percentage of the occupied housing units where at least 2 members are related by birth, marriage, or adoption in the ACS 2013-2017
pct_MrdCple_HHD_ACS_13_17	Percentage of the occupied housing units that have a married couple in the ACS 2013-2017
pct_Female_No_HB_ACS_13_17	Percentage of female-headed occupied housing units with no husband present in the ACS 2013-2017
pct_Sngl_Prns_HHD_ACS_13_17	Percentage of occupied housing units where a householder lives alone in the ACS 2013-2017
pct_HHD_PPL_Und_18_ACS_13_17	Percentage of occupied housing units with people under 18 in the ACS 2013-2017
avg_Tot_Prns_in_HHD_ACS_13_17	Average number of persons per occupied housing units in the ACS 2013-2017
pct_Rel_Under_6_ACS_13_17	Percentage of occupied housing units with a related child under 6 years old in the ACS 2013-2017
pct_HHD_Moved_in_ACS_13_17	Percentage of occupied housing units where the householder moved into the current unit in the ACS 2013-2017
pct_PUB_ASST_INC_ACS_13_17	Percentage of occupied housing units that receive public assistance income in the ACS 2013-2017
avg_Agg_HH_INC_ACS_13_17	Average aggregate household income in the ACS 2013-2017
pct_Vacant_Units_ACS_13_17	Percentage of vacant housing units in the ACS 2013-2017
pct_Renter_Occp_HU_ACS_13_17	Percentage of renter-occupied housing units in the ACS 2013-2017
pct_Single_Unit_ACS_13_17	Percentage of housing units that are single units in the ACS 2013-2017

	pct_MLT_U2_9_STRC_ACS_13_17	Percentage of multi-unit structures with 2-9 units in the ACS 2013-2017
	pct_Mobile_Homes_ACS_13_17	Percentage of housing units that are mobile homes in the ACS 2013-2017
	pct_Crowd_Occp_U_ACS_13_17	Percentage of occupied units that have more than 1.01 persons per room in the ACS 2013-2017
	pct_NO_PH_SRVC_ACS_13_17	Percentage of occupied housing units that do not have a working telephone and available service in the ACS 2013-2017
	pct_No_Plumb_ACS_13_17	Percentage of units housing units that do not have complete plumbing facilities in the ACS 2013-2017
	pct_Recent_Built_HU_ACS_13_17	Percentage of housing units constructed in 2010 or later in the ACS 2013-2017
ABS Frame	RouteType	Route Type (Street, Highrise or Other)
	DeliveryPointTypeCode	Type of delivery point (Curblin, Neighborhood Delivery and Collection Box Unit, Central or Other)
	DeliveryPointUsageCode	Delivery Point Usage (Residential or Primary Residential w/ Business)
	Seasonal	Indicator of whether the address is seasonal
	Vacant	Indicator of whether the address is vacant
	Missing_MSG	Indicator of whether the commercial data is missing
Commercial data	Age	Age of the individual or average age within a group.
	NumberOfAdults	Number of adults in the address
	Gender	Head of household gender
	Target18to24	Indicator of whether there are individuals aged 18 to 24 in the address
	Target25to34	Indicator of whether there are individuals aged 25 to 34 in the address
	Target35to64	Indicator of whether there are individuals aged 35 to 64 in the address

	Target65Plus	Indicator of whether there are individuals aged 65 or above in the address
	Income	Household income
	MaritalStatus	Head of household marital status (Married or Single)
	OwnRent	Home tenure (owner occupied or rental)
	Education	Head of household education level (High School Diploma, Some College, Bachelor's Degree, Graduate Degree, Less Than High School Diploma)
	DwellingType	Type of dwelling (Single- or Multi-family)
	Hispanic	Indicator of whether head of household is Hispanic
NYT's repository	COVID-19 infection rate	NDC-level COVID-19 infection rate
	COVID-19 mortality rate	NDC-level COVID-19 mortality rate