

Supplemental Information

Table SI-1. NAICS code.

Facility type	NAICS Code
Grocery	4452
	445110
	452311
Health	621
	622
	623
	446110
	446130
	446199
Recreation	7139
	71394
	713950
Restaurant	7225

Table SI-2. Model performance in five counties for Diabetes by different feature groups.

County	Socio-Demographic	POI density	Air condition	Micro-mobility	Visitation	Active Index	All-features
Cook, IL	0.734	0.684	0.514	0.684	0.651	0.552	0.737
Wayne, MI	0.729	0.691	0.671	0.597	0.685	0.613	0.724
Fulton, GA	0.721	0.738	0.607	0.738	0.689	0.721	0.754
Suffolk, MA	0.678	0.746	0.525	0.729	0.695	0.644	0.712
Queens, NY	0.603	0.608	0.361	0.505	0.546	0.448	0.619

Table SI-3. Model performance in five counties for Cancer by different feature groups.

County	Socio-Demographic	POI density	Air condition	Micro-mobility	Visitation	Active Index	All-features
Cook, IL	0.696	0.544	0.410	0.537	0.532	0.486	0.679
Wayne, MI	0.619	0.530	0.470	0.486	0.514	0.475	0.613
Fulton, GA	0.623	0.590	0.475	0.525	0.574	0.508	0.672
Suffolk, MA	0.678	0.576	0.509	0.627	0.542	0.356	0.661
Queens, NY	0.660	0.541	0.330	0.552	0.536	0.485	0.619

Table SI-4. Model performance in five counties for heart disease by different feature groups.

County	Socio-Demographic	POI density	Air condition	Micro-mobility	Visitation	Active Index	All-features
Cook, IL	0.618	0.554	0.435	0.577	0.554	0.519	0.625
Wayne, MI	0.591	0.575	0.492	0.492	0.503	0.536	0.586
Fulton, GA	0.705	0.672	0.508	0.639	0.623	0.623	0.656
Suffolk, MA	0.610	0.559	0.390	0.627	0.542	0.525	0.593
Queens, NY	0.500	0.454	0.361	0.521	0.438	0.438	0.536

Table SI-5. Model performance in five counties across four diseases by top five important features.

Obesity	County	Top five important features	Test Accuracy
	Cook, IL	Minority, Age, Emission, Active_index, CT_Avg_Trips	0.7215
	Wayne, MI	Age, Minority, Income, CT_Avg_ROG, N(restaurant)	0.7127
	Fulton, GA	Emission, Minority, N(rec), Active_index, Income	0.7049
	Suffolk, MA	Age, Minority, Income, Active_index, N(grocery)	0.6949
	Queens, NY	Income, Minority, N(grocery), N(rec), Emission	0.6907

Diabetes	County	Top five important features	Test Accuracy
	Cook, IL	Age, Minority, Income, Adj_V(health), CT_Avg_Time	0.7241
	Wayne, MI	Age, CT_Avg_ROG, N(grocery), Minority, Active_index	0.7127
	Fulton, GA	Emission, Minority, Income, Adj_V(health), Active_index	0.7049
	Suffolk, MA	Age, Minority, Income, Adj_V(rec), N(grocery)	0.6949
	Queens, NY	Income, Minority, N(grocery), N(rec), Age	0.6340

Cancer	County	Top five important features	Test Accuracy
	Cook, IL	Minority, Active_index, Emission, Income, N(grocery)	0.6481
	Wayne, MI	Minority, Income, N(grocery), CT_Avg_ROG, N(health)	0.5525
	Fulton, GA	Emission, Minority, Active_index, N(rec), Adj_V(health)	0.6721
	Suffolk, MA	Age, Minority, Income, Active_index, N(grocery)	0.6610
	Queens, NY	Minority, Income, N(grocery), Age, N(rec)	0.6289

Heart Disease	County	Top five important features	Test Accuracy
	Cook, IL	Age, Income, Minority, Emission, Adj_V(health)	0.6329
	Wayne, MI	Age, CBG_Avg_ROG, Minority, N(grocery), Active_index	0.5580
	Fulton, GA	Emission, Minority, Income, Adj_V(grocery), Active_index	0.6721
	Suffolk, MA	Emission, Age, Minority, Income, Adj_V(rec)	0.5932
	Queens, NY	Income, Age, Minority, N(grocery), N(rec)	0.5155