Cognability Contextual Variables
Technical Documentation

- All contextual data are publicly available at the National Neighborhood Data Archive
- We captured arts sites, civic and social organizations, coffee shops and fast-food restaurants, grocery stores, higher education campuses, libraries, museums, recreation centers, religious organizations, and senior centers through the National Establishment Time-Series (NETS) database, which provides annual records of the US economy with detailed business microdata for more than 75 million private for-profit and nonprofit establishments, in addition to government agencies. Establishments are categorized by the North American Industry Classification System (NAICS) from the U.S. Census Bureau
- We evaluated highways through the U.S. Census Bureau's TIGER/Line shapefiles
- Parks were measured by the Trust for Public Land's ParkServe data
- We captured polluting sites from the Environmental Protection Agency Toxics Release Inventory (TRI) program

Neighborhood feature	Description
Arts sites	Live production and arts performance establishments featuring actors and actresses, singers, dancers, musical groups and artists, and other performing artists (NAICS 7111).
Civic and social organizations	Establishments primarily engaged in promoting civic and social interests. Examples include social clubs, booster clubs, veterans' membership organizations, alumni associations, granges, ethnic associations, sororities/fraternities (NAICS 8134).
Coffee shops and fast-food restaurants	Limited-service restaurants (NAICS 722513) where patrons select items and pay before eating, such as fast-food restaurants, takeout sandwich shops, and limited-service pizza parlors; as well as snack and non-alcoholic beverage establishments (NAICS 722515) with on-premise brewing and baking that serve items such as coffee, bagels, pretzels, cookies, doughnuts, and ice cream.
Grocery stores	Grocery stores and supermarkets (NAICS 445110) as well as specialty food stores (NAICS 4452) for meat, seafood, fruits and vegetables, and baked goods.
Higher education campuses	Higher education institutions including colleges, universities, and professional schools (NAICS 611310).

Highways	The number of highway stretches, derived through primary and secondary road segments (divided interstate highways, US highways, state highways, county highways).
Libraries	Public libraries and archives (NAICS 519120) that maintain document collections (e.g., books, journals, newspapers, music, maps, historical photographs) for informational, research, educational, and recreational needs.
Museums	Establishments primarily engaged in the preservation and exhibition of objects of historical, cultural, and/or educational value (NAICS 7121). This includes art galleries and museums, planetariums, science and technology museums, and halls of fame.
Parks	Open public parks in cities, towns, and communities.
Polluting sites	Polluting sites within a census tract plus half-mile buffer. Facilities are typically larger and involved in manufacturing, metal mining, electric power generation, chemical manufacturing, and hazardous waste treatment.
Recreation centers	Fitness and recreational sports facilities (NAICS 713940) for exercise, physical conditioning, and recreational sports (e.g., gyms, aerobic dance or exercise centers, ice- or roller-skating rinks, physical fitness centers, racquetball or tennis club facilities, swimming or wave pools); in addition to golf courses (NAICS 713910).
Religious organizations	Establishments primarily engaged in administering, operating, or promoting religious activities, such as churches, temples, and monasteries (NAICS 813110).
Senior centers	Services for older adults and persons with disabilities (NAICS 624120) including adult day care centers, senior citizen activity centers, and non-residential social assistance programs that provide care, support, socialization, and companionship.

Note: All neighborhood measures are counts per 1,000 people residing in a census tract.