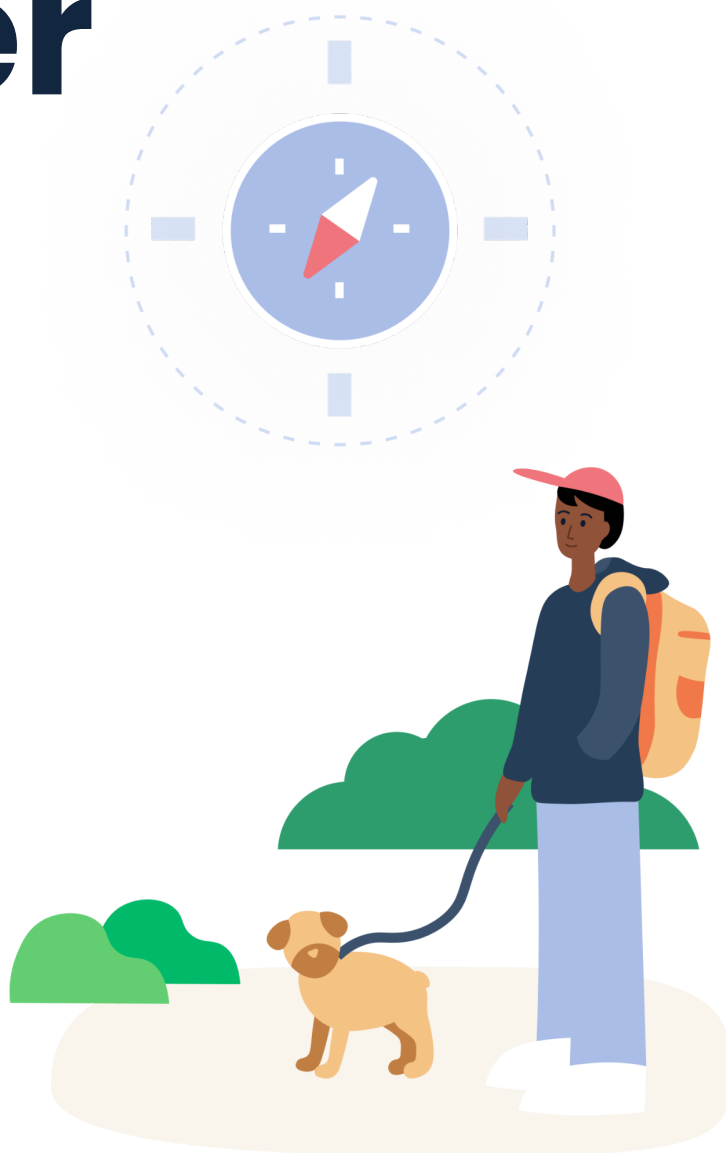


# Student Environment Explorer

Methodology

## Contents

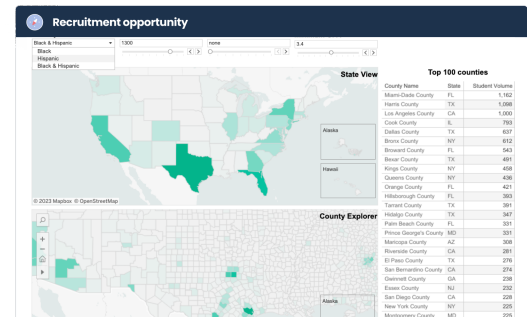
- Overview
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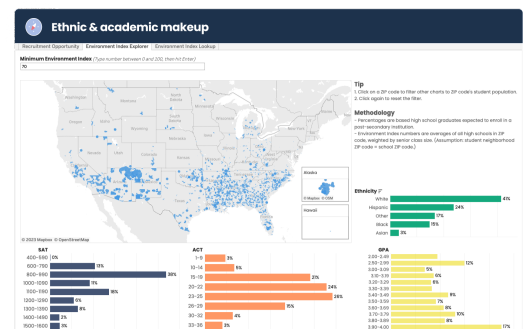
# Overview

The free Student Environment Explorer (SEE) tool, found at [go.collegevine.com/student-environment-explorer](https://go.collegevine.com/student-environment-explorer), consists of three powerful dashboards.

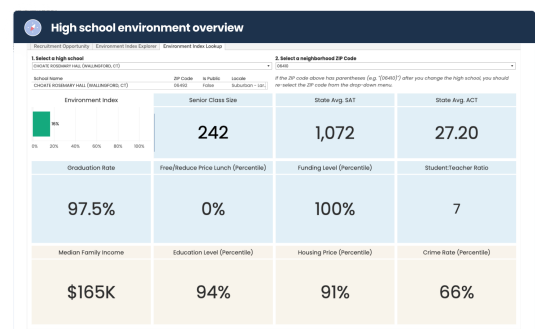
1. **Recruitment opportunity** – identify recruitment opportunities for the student segments you care most about, with county-level data and the ability to filter for your target academic profile.



2. **Ethnic & academic makeup** – learn how your office can deploy the Environment Index to build on-campus diversity in the new legal environment.



3. **High school environment overview** – powerful contextual data about every high school in the country with the click of a button.



CollegeVine's Environment Index provides key information about a student's high school and neighborhood. It allows admissions officers to analyze student applications and profiles with more context about the student's educational and life journeys. The following document walks through the data and methodology behind the Environment Index.

This data is meant to be considered alongside other key information in a student's application such as grades, essays, interviews, resumes, and family information.

The data is provided at an aggregate level based on published government and academic datasets, and no individual student information is used in the calculations.

Environment Index is a proprietary measurement brought to you by CollegeVine. It's conveniently available to all CollegeVine [partner](#) institutions as part of our full suite of recruiting tools. In addition, Environment Index calculations power [the free SEE tool](#) as part of our effort to increase college access.

**Alina Johnson**  
Class of '24 | Dec. 20<sup>th</sup>

Montgomery, GA | Montgomery High School

Female | First-generation

Criminology  
Careers: Doctor, Criminal Justice


















**Environment Index**  
**78%**   
A higher percentile means a more challenging school and neighborhood environment

Montgomery High school  
Public • Suburban

ABOUT MONTGOMERY HIGH SCHOOL	
Senior class size	614
Georgia avg. SAT	1040
Eligible for free/reduced lunch	54%
Student-to-Teacher Ratio	37:1

The Environment Index data set consists of 8 data points related to a student's high school, 2 data points related to statewide standardized test performance, 5 data points related to a student's neighborhood, and an overall data point that summarizes the various data points into a single figure (Environment Index). These data points are meant to highlight the kinds of in-school and environmental challenges that can affect a student's educational journey.

## List of Data Points

High School data points	Academic data points	Neighborhood data points
 High School Name	 Statewide ACT® Average	 Social Capital
 High School Type	 Statewide SAT® Average	 Economic Mobility
 Locale		 Household Structure
 Senior Class Size		 Median Family Income
 Percentage of Students Eligible for Free and Reduced Price Lunch (Public HS only)		 Average House Price
 Graduation Rate		 Education Level
 Funding Level		 Crime
 Student:Teacher Ratio		












Admissions teams can use this data to help inform recruitment efforts and strategy (for example reaching and supporting more students from challenging neighborhood environments). It can also be used to account for the impact of a challenging school environment on a student's application during the assessment and reading of applications.

# Understanding the Environment Index

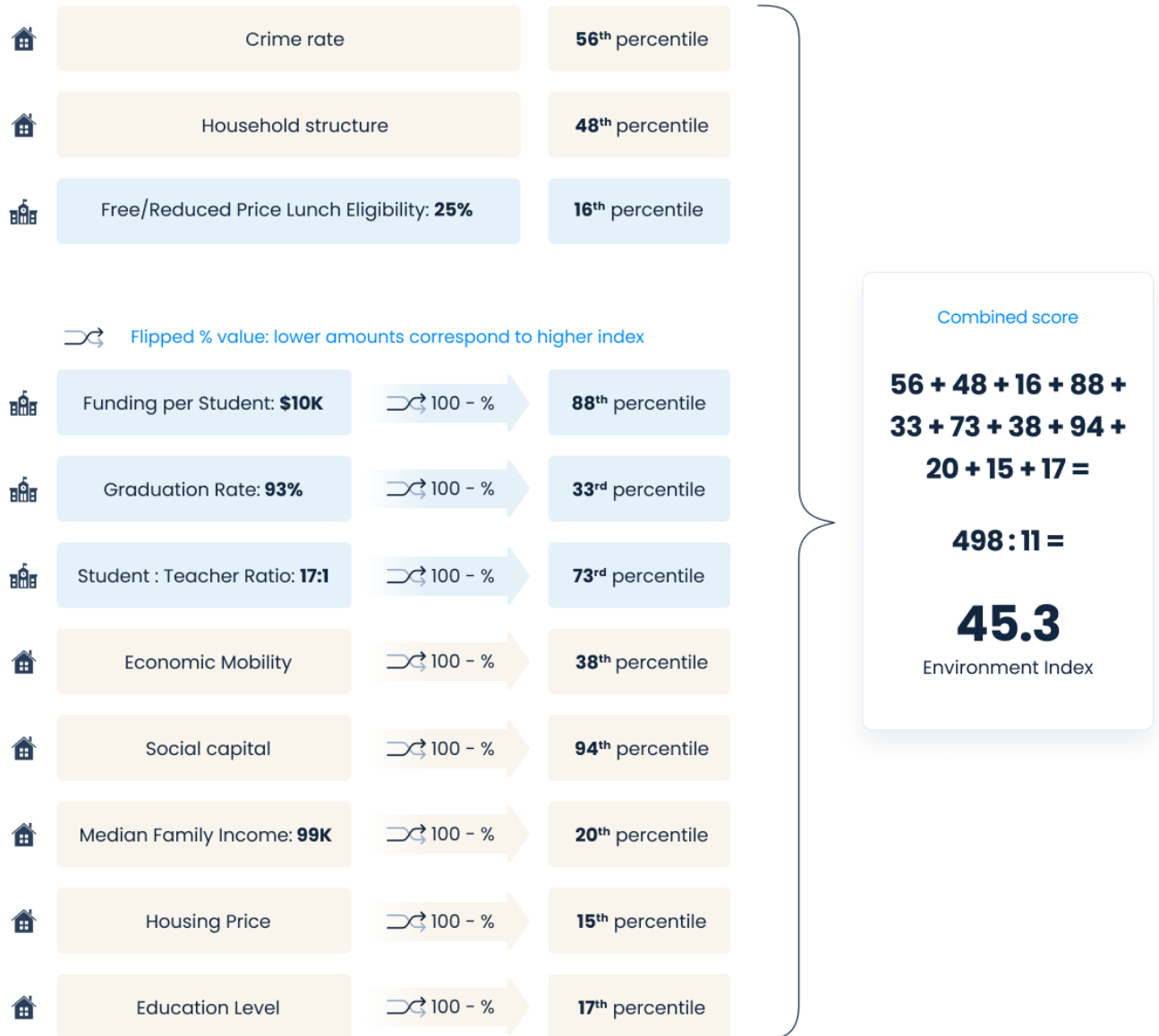
CollegeVine's Environment Index provides a summary of key high school and neighborhood data points that help contextualize the challenges that a student has faced during their educational journey.

The Environment Index is calculated on a 0-100 scale, and a higher score represents a more challenging environment across these 11 variables. For Percentage of Students Eligible for Free and Reduced Price Lunch, Student: Teacher Ratio, Household Structure, and Crime a higher percentile ranking corresponds with a higher Environment Index. For the remaining variables, a lower percentile ranking corresponds with a higher Environment Index.

## Environment Index includes 11 data points (normalized to percentile rankings)

High School data points	Neighborhood data points
 Funding Level	 Average House Price
 Student : Teacher Ratio	 Crime rate
 Graduation Rate	 Economic Mobility
 Percentage of Students Eligible for Free and Reduced Price Lunch	 Educational Level
	 Household Structure
	 Median Family Income
	 Social Capital

## Example – calculating the Environment Index



# Recruiting Opportunities Methodology

1. Apply high school matriculant rate to the total number of public and private high school graduates, by state and ethnicity.
2. Allocate matriculants by state and ethnicity to counties using the relative high-school aged population, given an ethnicity.
3. Allocate the matriculants by county and ethnicity into SAT® bands using a blend of the distribution of state SAT® participation and CollegeVine student reported scores.
4. Allocate matriculants by county, ethnicity, and SAT® band to ACT® and GPA bands using joint distributions derived from CollegeVine's student data.

## Data sources – SEE

- [WICHE](#)'s estimate of total public and private high school graduates by state and ethnicity for 2022–23.
  - “American Indian/Alaska Native”, “Native Hawaiian/Other Pacific Islander”, and “Two or More Races” collapsed into an “Other” group.
- [NCES](#)'s 2021 3-year average college enrollment rate among recent high school graduates.
  - “Total” number used for the “Other” ethnicity group.
- [2021 5-Year American Community Survey \(ACS\)](#) age 15 through 17 population by county, ethnicity, and gender.
  - “American Indian and Alaska Native”, “Native Hawaiian and Other Pacific Islander”, “Some Other Race”, and “Two or More Races” collapsed into an “Other” group.
- [College Board](#)®'s 2022 reported SAT® scores by SAT® band, state, and ethnicity.
  - “American Indian”, “Native Hawaiian”, and “Two or More Races” collapsed into an “Other” group.
  - “Total” estimate used when a state did not report for a specific ethnicity.
- CollegeVine student-reported SAT®, ACT®, and GPA

# Data Overview and Sources

## High School Data Points

### High School Name:

Name of the student's high school

### High School Type

Classification as public or private

Source (Public): presence in NCES [Common Core of Data \(CCD\)](#) for public high schools

Source (Private): NCES [Private School Universe Survey \(PSS\)](#) for private high schools.

### Locale

Location of the high school: City, Suburban, Town, or Rural

Source: CCD - [NCES EDGE](#) (public), PSS (private)

### Senior Class Size

Size of the graduating senior class

Source (Public): CCD - Three-year average of 2019-20, 20-21, and 21-22 senior class size

Source (Private): PSS - average of 2017 and 2019 values

### Percentage of Students Eligible for Free and Reduced Price Lunch (Public HS only)

The percentage of students eligible for free and reduced-price lunch

Source (Public): CCD - Three-year average (19-20, 20-21, 21-22) of percentages

Source (Private): N/A

### Graduation Rate

Four-year graduation rate at the high school

Source (Public): [US DOE Adjusted Cohort](#)

[Graduation Rate](#) - Three-year average (18-19, 19-20, 20-21) of graduation rates

Source (Private): [PSS](#) - 2018-19 data

### Funding Level

Percentile rank of expenditures per student

Source (Public): CCD district fiscal and student membership files - three year average (16-17, 17-18, and 18-19) of expenditures per student

Source (Private): N/A

### Student:Teacher Ratio

Student-to-teacher ratio based on FTE teacher headcount

Source (Public): CCD - Three-Year average (18-19, 19-20, 20-21) of student:teacher ratio

Source (Private): PSS - Average of 2017 and 2019 data

### Academic Performance

Statewide average ACT® and SAT® scores for 2021

Source: [2021 Digest of Education Statistics](#)

# Neighborhood Data Points

## Social Capital

Percentile ranking of the neighborhood's level of social capital as measured by Opportunity Insights

Source: [Social Capital Atlas \(Opportunity Insights\)](#) - Average of percentile ranks for six variables: Exposure, Friendship Bias, Clustering, Cohesiveness-Support Ratio, Volunteering, and Density of Civic Organizations (see lookup variables section for full definitions).

## Economic Mobility

Percentile ranking of the neighborhood's level of economic mobility as measured by Opportunity Insights

Source: [Opportunity Atlas \(Opportunity Insights\)](#) - Percentile ranking for levels of economic mobility for low income households (below 25th percentile of national income distribution)

## Household Structure

Percentile ranking averaging the number of households with children living in poverty, single parent households, and single mother households living in poverty from the American Community Survey

Source: [2021 5-Year American Community Survey \(ACS\)](#)

## Median Family Income

2021 median family income in the neighborhood

Source: 2021 5-Year ACS

## Average House Price

Percentile rank of the average of median-gross rent and monthly home-owner costs

Source: 2021 5-Year ACS

## Education Level

Percentile ranking for the percentage of over-25 adults with a Bachelor's degree or more

Source: 2021 5-Year ACS

## Crime

Percentile ranking for the level of crime in a neighborhood (aggregate of murder and nonnegligent manslaughter, rape, robbery, and aggravated assault)

Source: [FBI Uniform Crime Reporting \(UCR\) Program](#) - Annual average between 2010-2021

# Appendix

## Lookup Variables and Calculation Methodology

The specific data tables, variable names, and calculations used in *Context* data are outlined below, split across high school and neighborhood data points.

### High School

#### HS Locale

Public: LOCALE (NCES Edge)

Private: ULOCALE (PSS)

#### Senior Class Size

Public: TOTAL\_INDICATOR = "4. All grades" & GRADE = "Grade 12" (CCD)

Private: P300 (PSS)

#### Free & Reduced Price Lunch

Public: TOTAL\_INDICATOR = "Education Unit Total", DATA\_GROUP = "Free and Reduced-price Lunch Table" relative to other DATA\_GROUPS in school

Private: N/A

#### Graduation Rate

Public: RATE (US Department of Education Adjusted Cohort Graduation Rate)

Private: [PSS Data Table 13](#)

#### Funding Level

Public: TOTALREV divided by sum of STUDENT\_COUNT for schools in district

Private: Average tuition charged (in constant 2020-21 dollars)

#### Student:Teacher Ratio

Public: STUDENT\_COUNT divided by TEACHERS for DMS\_FLAG = "Reported", TOTAL\_INDICATOR = "Education Unit Total"

Private: NUMSTUDS divided by NUMTEACH

#### Academic Performance:

Table 226.60 Average ACT® scores and percentage of graduates taking the ACT, by state: 2017 and 2021

- a. Table 226.40 SAT® mean scores of high school seniors, standard deviations, and percentage of the graduating class taking the SAT®, by state: 2017 through 2021

# Neighborhood

## Social Capital

Percentile rank of the ascending/inverse average percentile rank of the following features from the Opportunity Insights' [Social Capital Data by ZIP Code CSV](#):

### 1. Exposure (Connectedness)

- exposure\_grp\_mem\_zip – The extent to which people with low versus high socioeconomic status (SES) participate in the same groups

### 2. Friendship Bias (Connectedness)

- bias\_grp\_mem\_zip – The tendency for low-SES people to befriend high-SES people at lower rates even conditional on exposure

### 3. Clustering (Cohesiveness)

- clustering\_zip – The average fraction of an individual's friend pairs who are also friends with each other

### 4. Support Ratio (Cohesiveness)

- support\_ratio\_zip – The proportion of within-ZIP code friendships where the pair of friends share a third mutual friend within the same ZIP code

### 5. Volunteering Rate (Civic Engagement)

- volunteering\_rate\_zip – The percentage of Facebook users who are members of a group which is predicted to be about 'volunteering' or 'activism' based on group title and other group characteristics

### 6. Density of Civic Organizations (Civic Engagement)

- civic\_organizations\_zip – the number of Facebook Pages predicted to be "Public Good" pages based on page title, category, and other page characteristics, per 1,000 users in the ZIP code

## Economic Mobility

1. Mean household income rank for children whose parents were at the 25th percentile of the national income distribution (kfr\_pooled\_pooled\_p25)
2. Tracts mapped to zip with [HUD crosswalk](#)

## Household Structure

1. Percentage of individuals under 18 years of age in poverty
  - a. "POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE": sum of variable = "B17001\_00[4,5,6,7,8,9,18,19,20,21,22,23]" relative to "B17001\_001"
2. Percentage of families with a female householder, no male householder, at least one child under 18 years of age, and are in poverty

- a. "POVERTY STATUS IN THE PAST 12 MONTHS OF FAMILIES BY FAMILY TYPE BY PRESENCE OF RELATED CHILDREN UNDER 18 YEARS BY AGE OF RELATED CHILDREN" : variable = "B17010\_016" relative to "B17010\_001"
3. Percentage of families that are single-parent families with at least one child under 18 years of age
  - a. "FAMILY TYPE BY PRESENCE AND AGE OF OWN CHILDREN UNDER 18 YEARS" : sum of variable = "B11003\_01[0,6]" relative to "B11003\_001"
4. Tracts mapped to zip with HUD crosswalk

#### Median Family Income

1. "MEDIAN FAMILY INCOME IN THE PAST 12 MONTHS (IN 2021 INFLATION-ADJUSTED DOLLARS) BY FAMILY SIZE", variable = "B19119\_001"
2. Tracts mapped to zip with HUD crosswalk

#### Average House Price

1. Median gross rent
  - a. "MEDIAN GROSS RENT (DOLLARS)", variable = "B25064\_001"
2. Monthly home-owner costs
  - a. "MEDIAN SELECTED MONTHLY OWNER COSTS (DOLLARS) BY MORTGAGE STATUS", variable = "B25088\_002"
3. weighted by percentage of housing units that are rented and owned
  - a. Rented: TENURE", variable = "B25003\_003"
  - b. Owned: TENURE", variable = "B25003\_002"
4. Tracts mapped to zip with HUD crosswalk

#### Education Level

1. "EDUCATIONAL ATTAINMENT AND EMPLOYMENT STATUS BY LANGUAGE SPOKEN AT HOME FOR THE POPULATION 25 YEARS AND OVER" , variable = "B16010\_041" relative to "B16010\_001"
2. Tracts mapped to zip with HUD crosswalk.

#### Crime

1. FBI offense data collected by originating agency identifier (ori) mapped to zip with HUD crosswalk
  - a. Offense API endpoint:  
https://api.usa.gov/crime/fbi/sapi/api/summarized/agencies/{ori}/offense/{from\_year}/{to\_year}
  - b. Agency API endpoint: https://api.usa.gov/crime/fbi/sapi/api/agencies
2. Population data from the 2010-2019 Census, tracts mapped to zip with HUD crosswalk