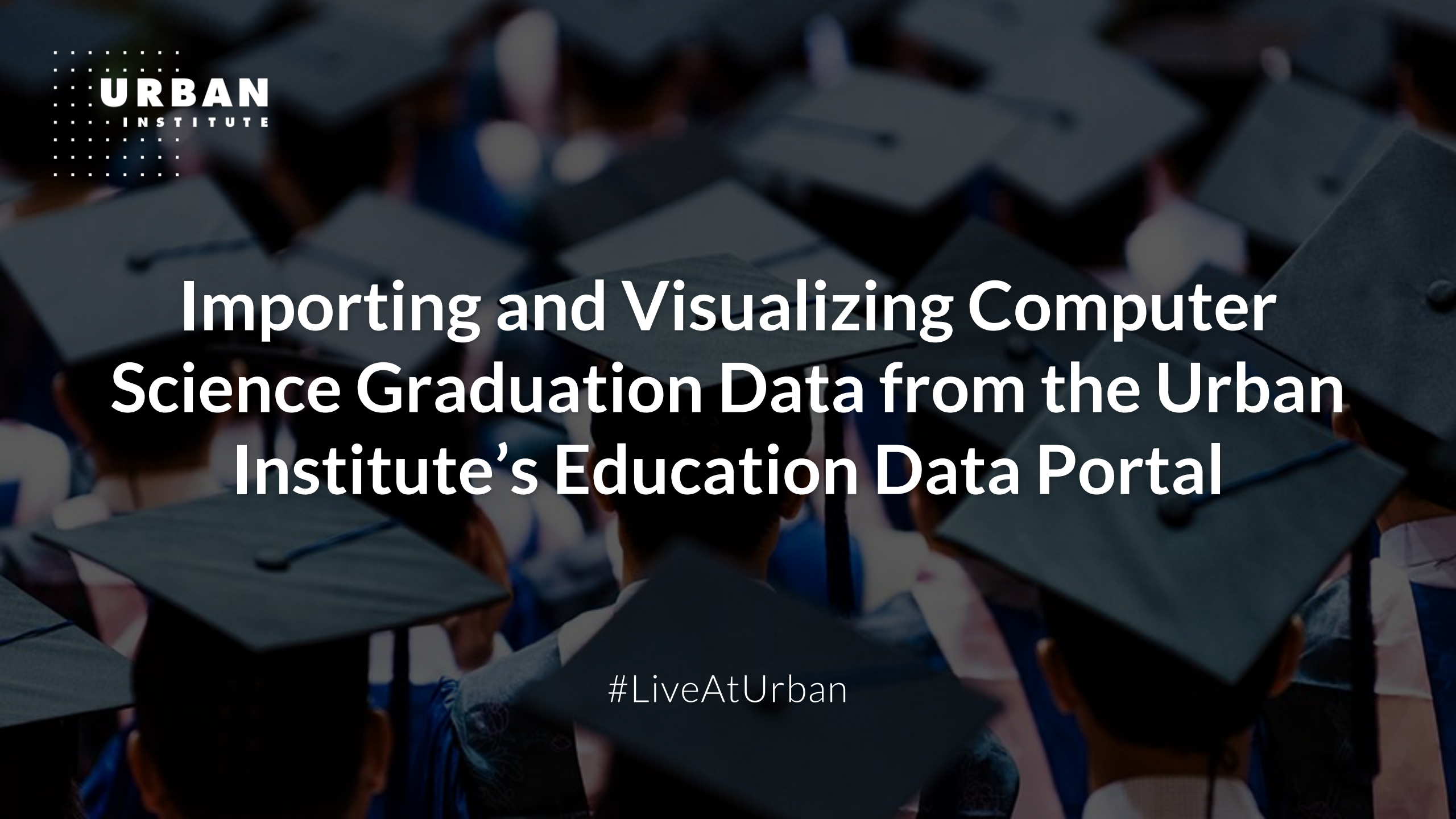


URBAN INSTITUTE

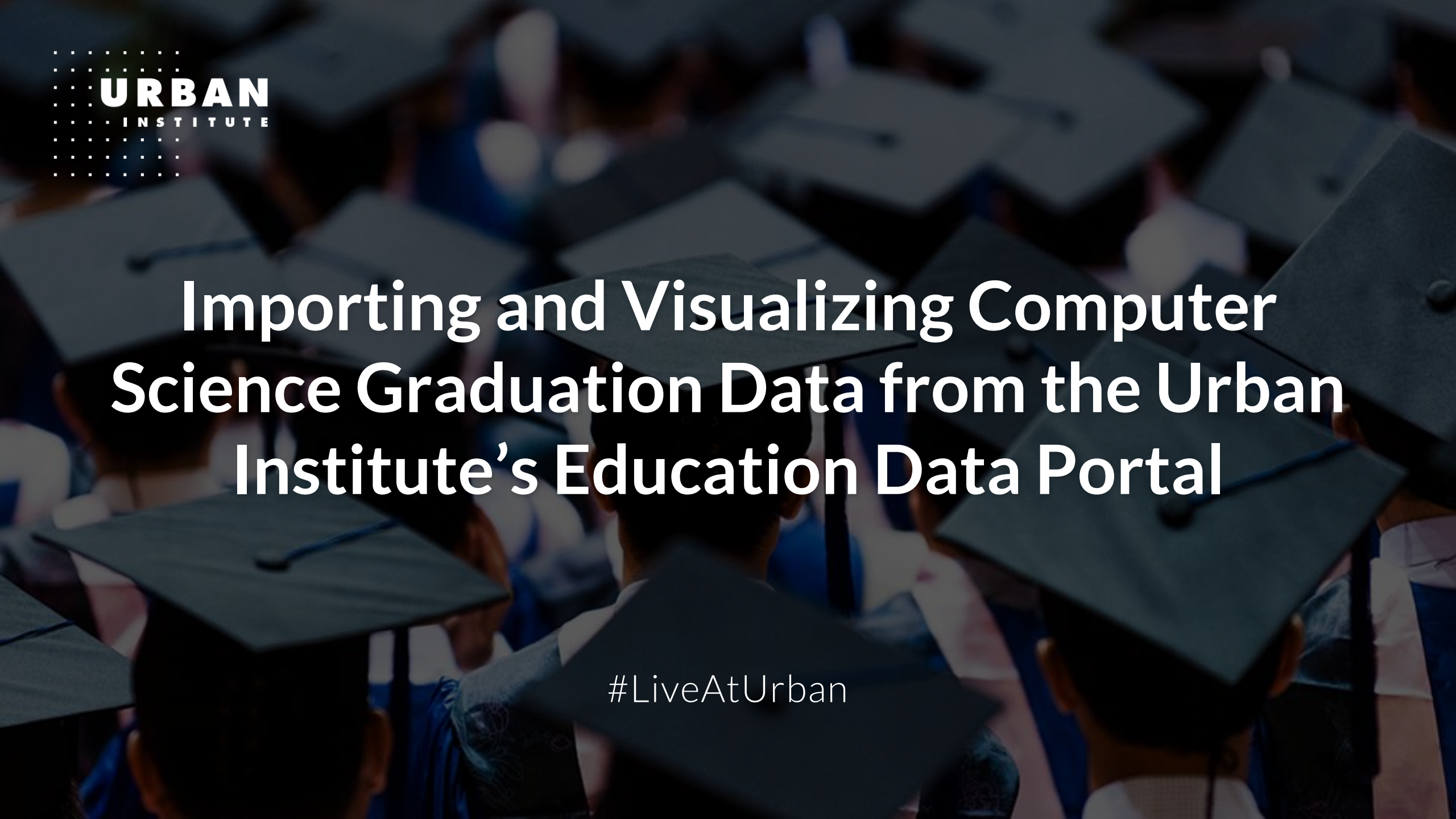
Importing and Visualizing Computer Science Graduation Data from the Urban Institute's Education Data Portal

#LiveAtUrban

Housekeeping

- Webinar is being recorded and the recording will be posted online afterward.
- Hide captions or adjust settings with the Live Transcript button.
- Slides are posted online at Urban.org
- All participants are muted.
- Type your **questions** and **comments** into the Q&A box at any time.
- Please complete the survey at the end of the event.

#LiveAtUrban



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Education Data Portal Overview

Data in the Education Data Portal

- All major national datasets on schools, districts, and colleges.
- Institution-level data (not student-level data)
- Institutions are linked to geographies, such as neighborhoods, counties, and cities

PK-12 Data

- School enrollment
- Student demographics
- Teachers employed
- Test scores
- Student discipline
- District finance
- Course offerings

Higher Education Data

- Institutional Characteristics
- Admissions
- Enrollment
- Student demographics
- Retention and graduation rates
- **Degrees awarded by major**
- Institutional finances
- Tuition and financial aid
- Post-college earnings
- Student loan repayment

Access Tools

- API (all data)
- File downloads (all data)
- Stata/R packages (all data)
- Data Explorer point-and-click web tool (most data)
- School Enrollment Tool (enrollment trends by race/ethnicity for individual schools)
- CIP 11 Tableau Connector (computing degree awards data by race/ethnicity and gender)

Education Data at Your Fingertips

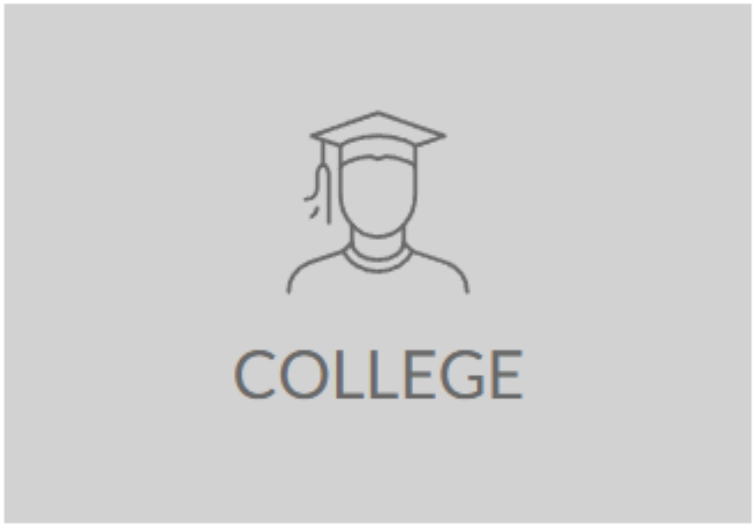
GET STARTED

The best policy decisions are those based on evidence and fact. The Education Data Explorer allows you to build your own dataset, by narrowing your search by education level, geography, timeframe, and indicator. The Explorer makes it easier than ever to generate rigorous, accurate, and actionable insights to improve student outcomes.

Education Level

READY TO GET STARTED?

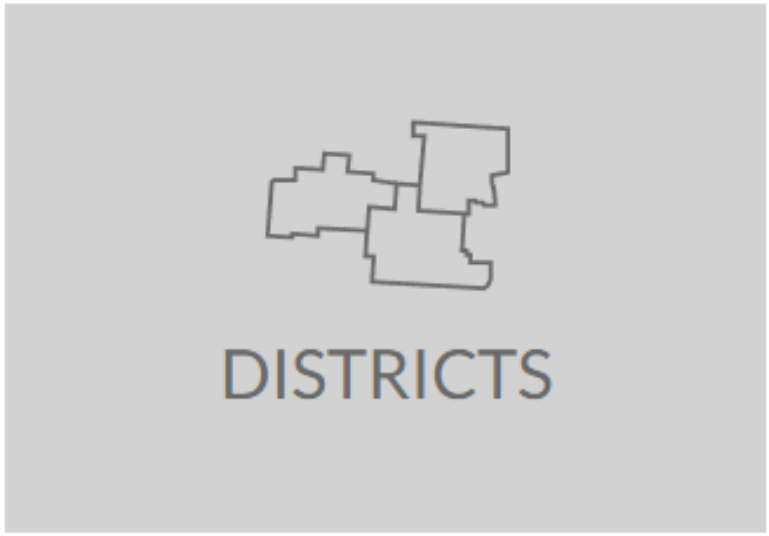
Choose Education Level



Education Level

Data Level

Choose Data Level



Education Level

Data Level

Geography and Timeframe

Choose Geography and Timeframe

STATE(S)*

District of Columbia × *Maryland* × *Virginia* ×

TIMEFRAME

Most recent year available

Selecting "Most recent year available" will output the most recent data available for each selected indicator, which can differ across datasets.

NEXT

Find Data On

Find data on

Select all that apply

School Characteristics

School characteristics

Geographic and identification information

Absenteeism

College Readiness

Course Offerings

Demographics

Discipline

School Safety

Student Outcomes

Teachers and Staff

SCHOOL CHARACTERISTICS

NO Select all options

YES School level

NO School type

YES Status at start of school year

YES Lowest grade offered

YES Highest grade offered

NO Elementary school indicator (Center on Education Data and Policy variable)

GENERATE DATA

Your request generated 2 data files. Click to download.

EducationDataPortal_02.09.2022_datadictionary.csv (12 rows)

EducationDataPortal_02.09.2022_Schools.csv (6 rows)

Click to download a zip file with all 2 files.

EducationDataPortal_02.09.2022_all_files.zip

CLICK TO COPY A DIRECT LINK TO THIS QUERY

Explore Your School's Changing Demographics

Last updated June 23, 2021

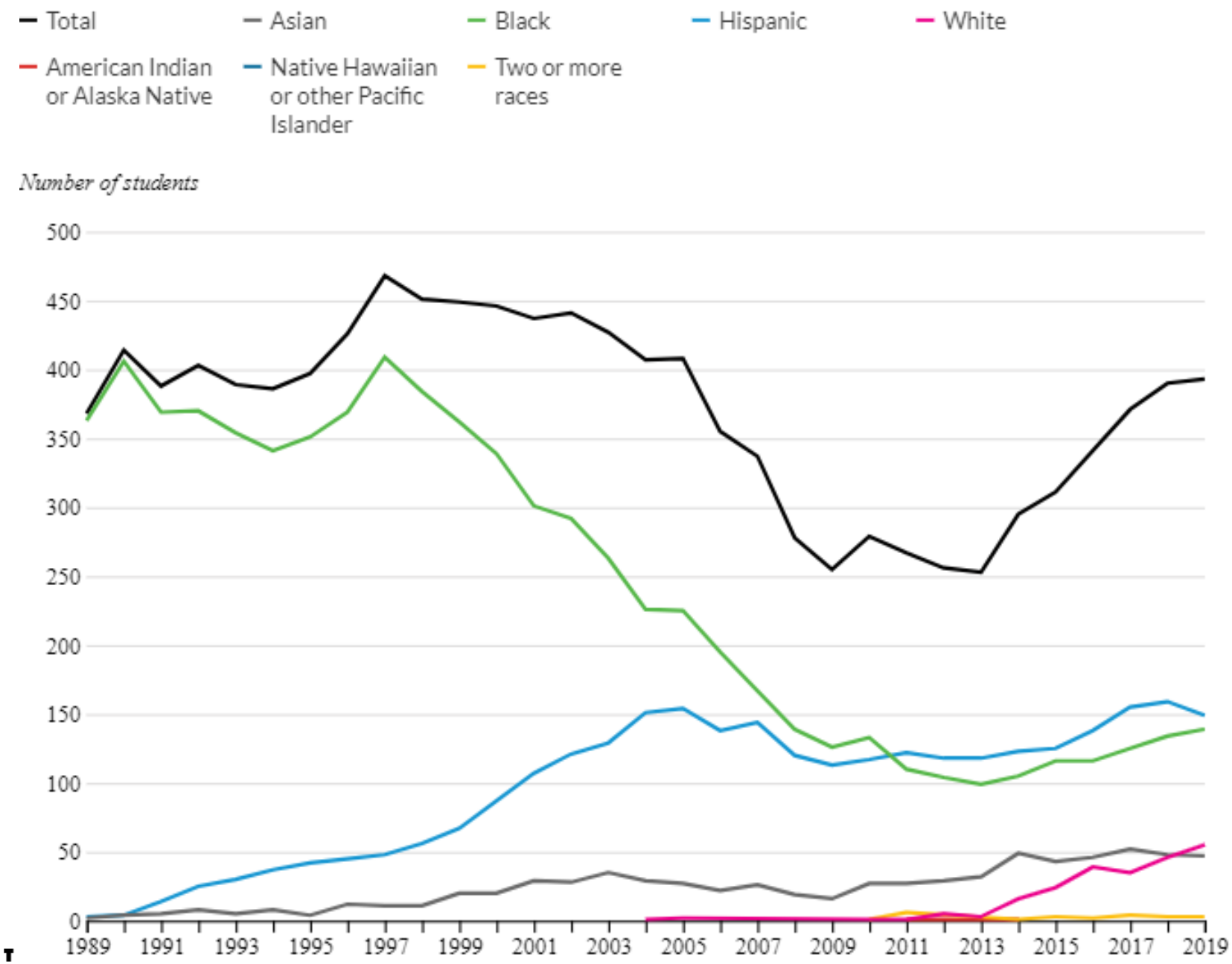
US schools have become more racially and ethnically diverse over the past few decades, but these changes have played out differently across the country. Understanding a school's demographics can inform conversations around school segregation, redistricting, funding, and equity.

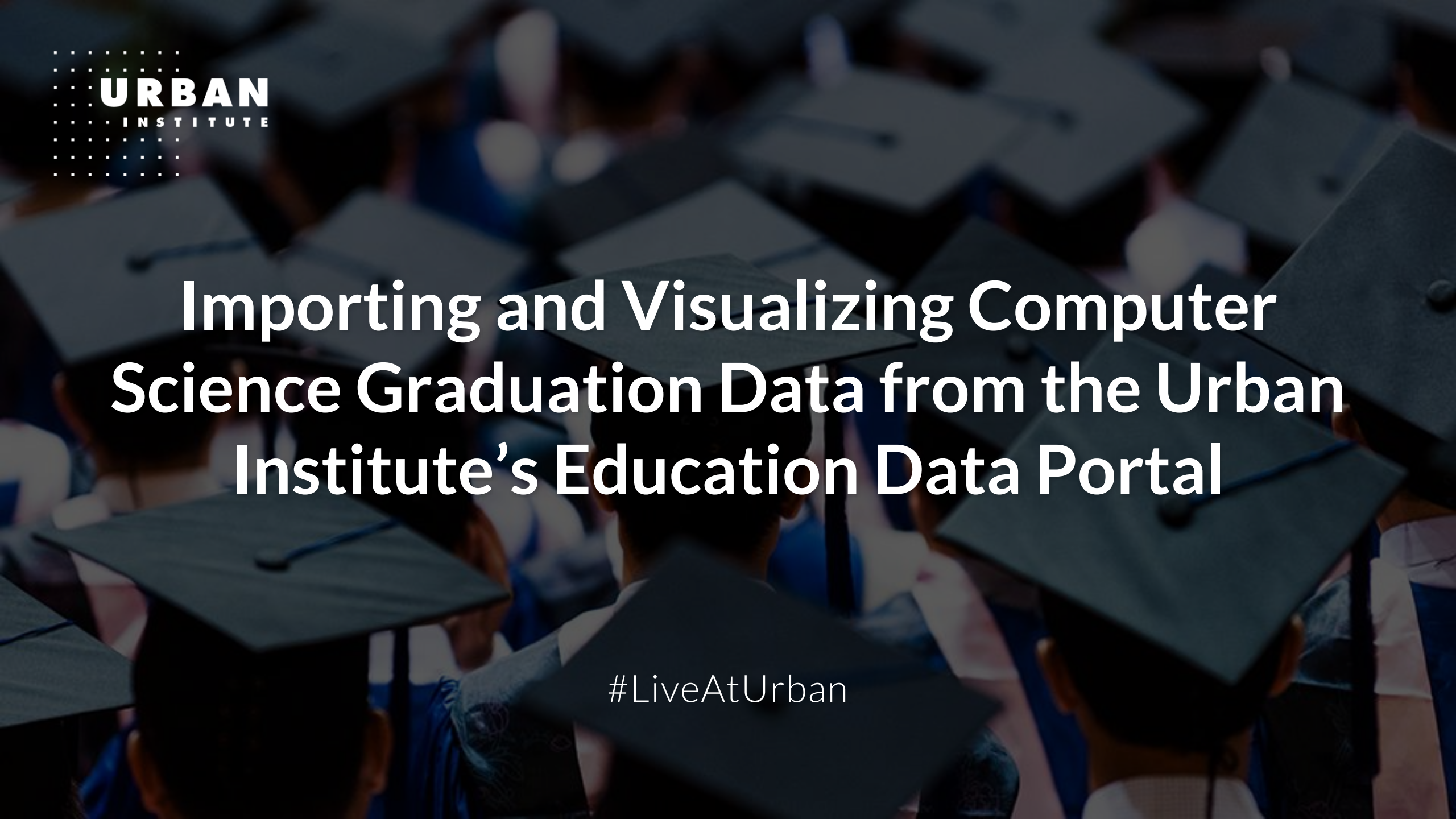
Search for your PK–12 school (prekindergarten through 12th grade) to see how student enrollment by race or ethnicity has changed.

District of Columbia

Seaton ES, Washington, DC

Enrollment in Seaton ES





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URBAN INSTITUTE · ELEVATE · THE · DEBATE

Monday, February 14, 2022

Importing and Visualizing Computer Science Graduation data from the Urban Institute's Education Data Portal

Callista Chen, Matthew Chingos, Michelle Menezes, Clayton Seraphin

What is a Web Data Connector?

- Allows users to connect to data that is accessible over the web
- You can use a connector that has already been built or create your own
- You can look at the Tableau Web Data connector Community Portal to find various connectors built by the Tableau Community

What does our connector do?

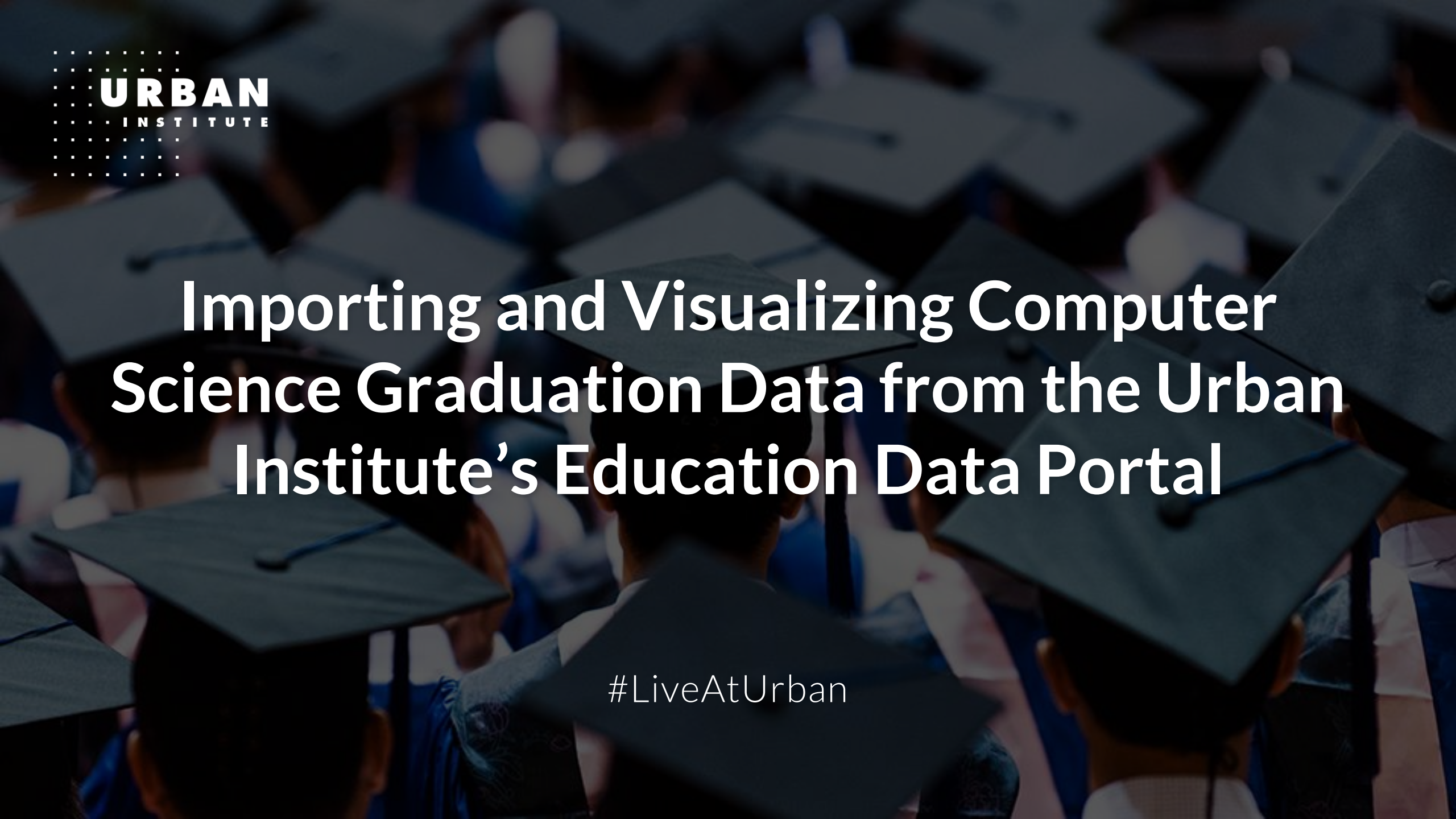
- Our connector pulls **IPEDS Awards Data for CIP code 11** from the Education Data Portal
  - **IPEDS**: The Integrated Postsecondary Education Data System
  - **Awards**: certificate or degree awards
  - **CIP Code**: 2-digit Classification of Instructional Programs, a detailed coding system for postsecondary instructional programs
    - **CIP Code 11**: Computer and information sciences and support services
- Data is at the institution level
- Data is disaggregated by sex and race

Examples of organizations for which analyzing this data could be useful

- Nonprofits that work to increase diversity in computing (including Reboot Representation)
- Nonprofits that do mentoring, tutoring, or scholarships for university students
- Companies that want to recruit computer science graduates with computing degrees

Examples of questions these organizations might aim to answer

- Which universities have the most Black, Latina, or Native women graduating with computing degrees?
- Which of those are HBCUs or Tribal Colleges?
- How have those results changed over time?
- Which universities are closest to gender parity? We can look into their policies and practices.
- How do the graduation rates differ between public and private universities?



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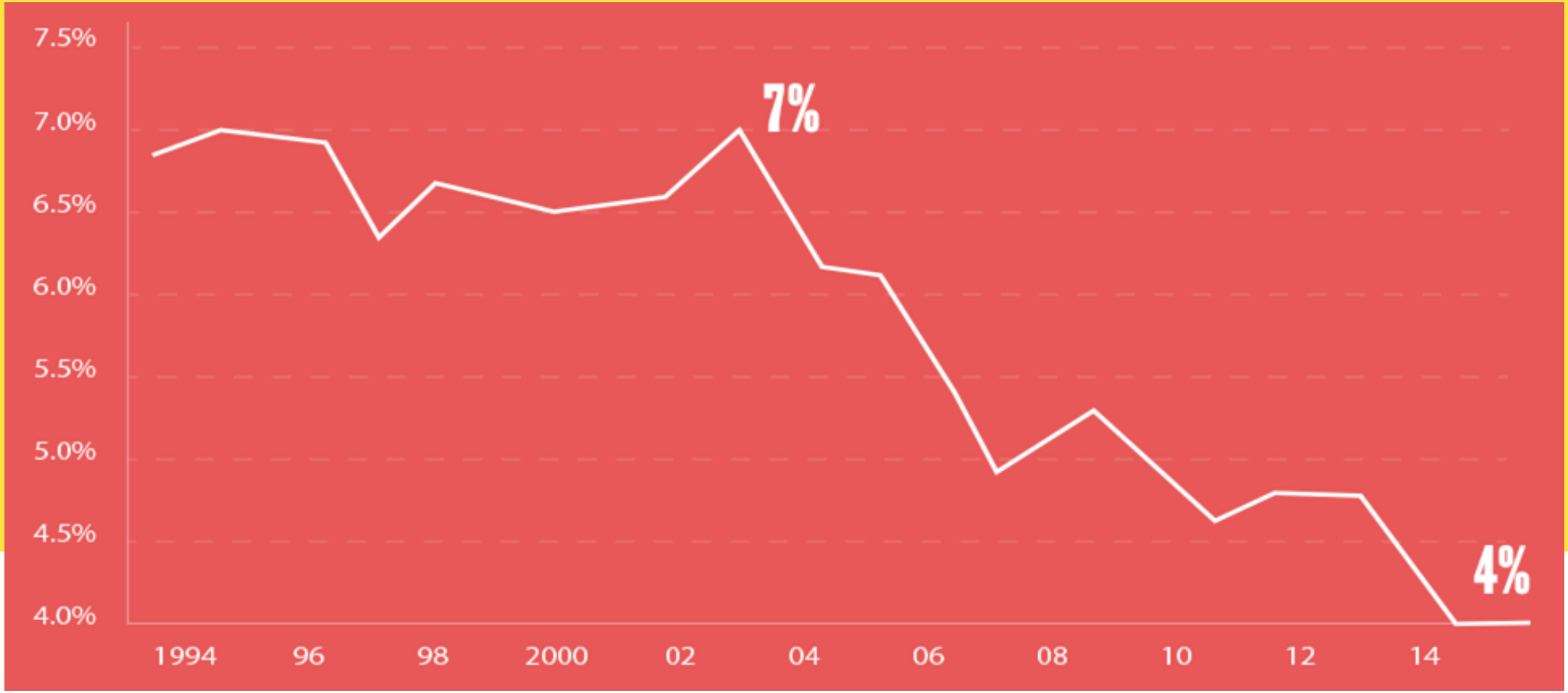
REBOOT REPRESENTATION

Centering Black, Latina, and Native American Women in Computing

Percentage of Black, Latina, and Native American (BLNA) women receiving computing bachelor's degrees.



REBOOT REPRESENTATION

REBOOT REPRESENTATION

Through collective action, we can change the story.

Walmart
UKG
DELL Technologies
intel
RIOT GAMES
verizon
Cognizant
COMCAST NBCUNIVERSAL
NortonLifeLock
amazon
APPLIED MATERIALS
BEST BUY
LinkedIn
Qualcomm
f5
servicenow
S&P Global Foundation
auth0
Microsoft

We're **doubling** the number of Black, Latina, and Native American (BLNA) women with **computing degrees**.

Offer diverse on-ramps for computing

Provide access to technology and computing experiences

Build confidence in her abilities

Cultivate a community of supportive peers

Create continuity between computing experiences

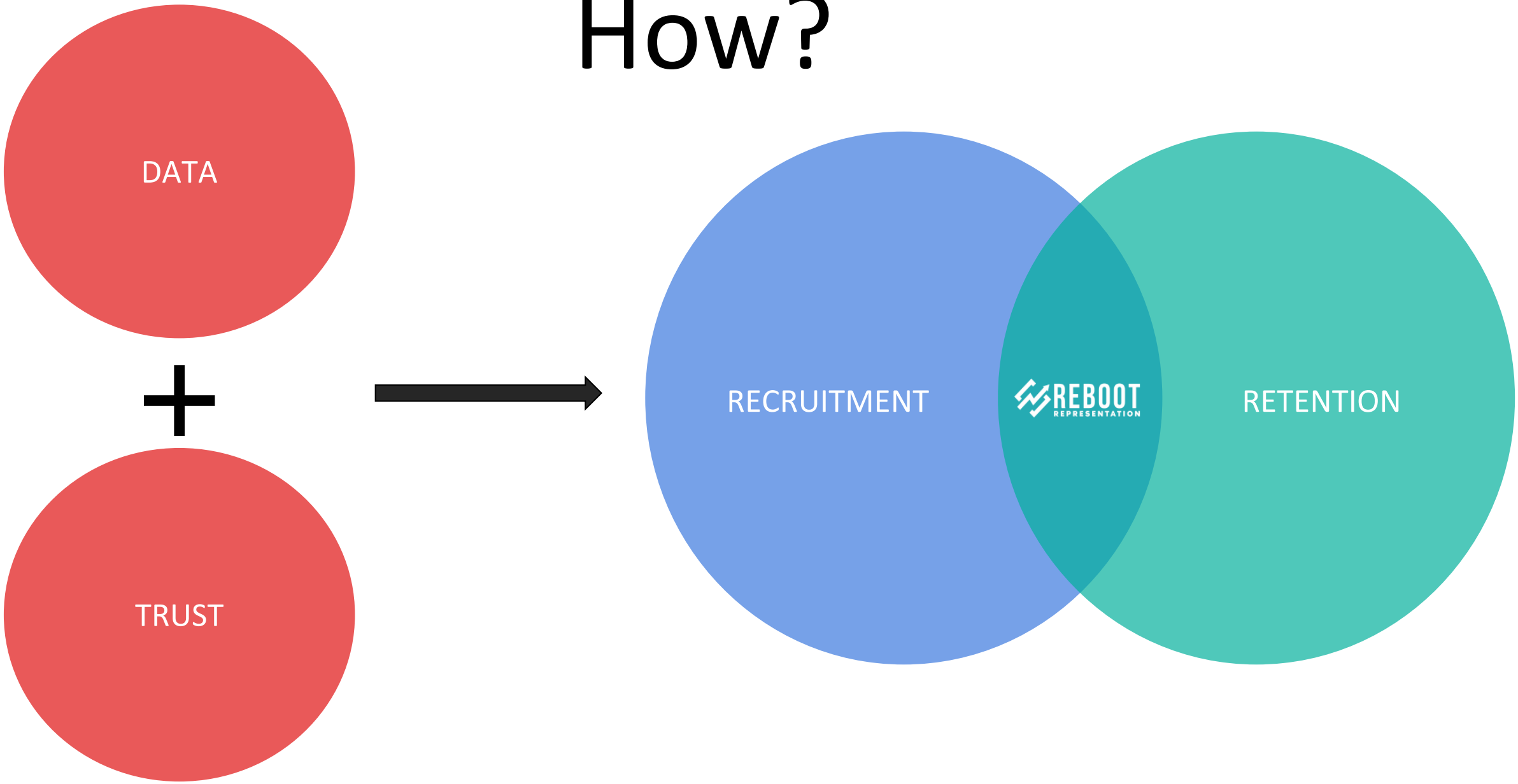
Ensure adult gatekeepers (family, teachers, counselors) are encouraging and Inclusive

Create a sense of belonging

Foster interest in computing careers

REBOOT REPRESENTATION

How?



How do we use data?

1. To find the students
2. To measure the impact of our investments

REWRITING THE CODE />

Empowering the next generation of women in tech

Virtual community of 10,000+ college & early career women

Skill development for Black & Latina college students

Exposure to AI, cyber, data science & machine learning

REBOOT REPRESENTATION

latinas de rtc

rtc black wings

REWRITING THE CODE />

Where should Black Wings and Latinas de RTC expand?

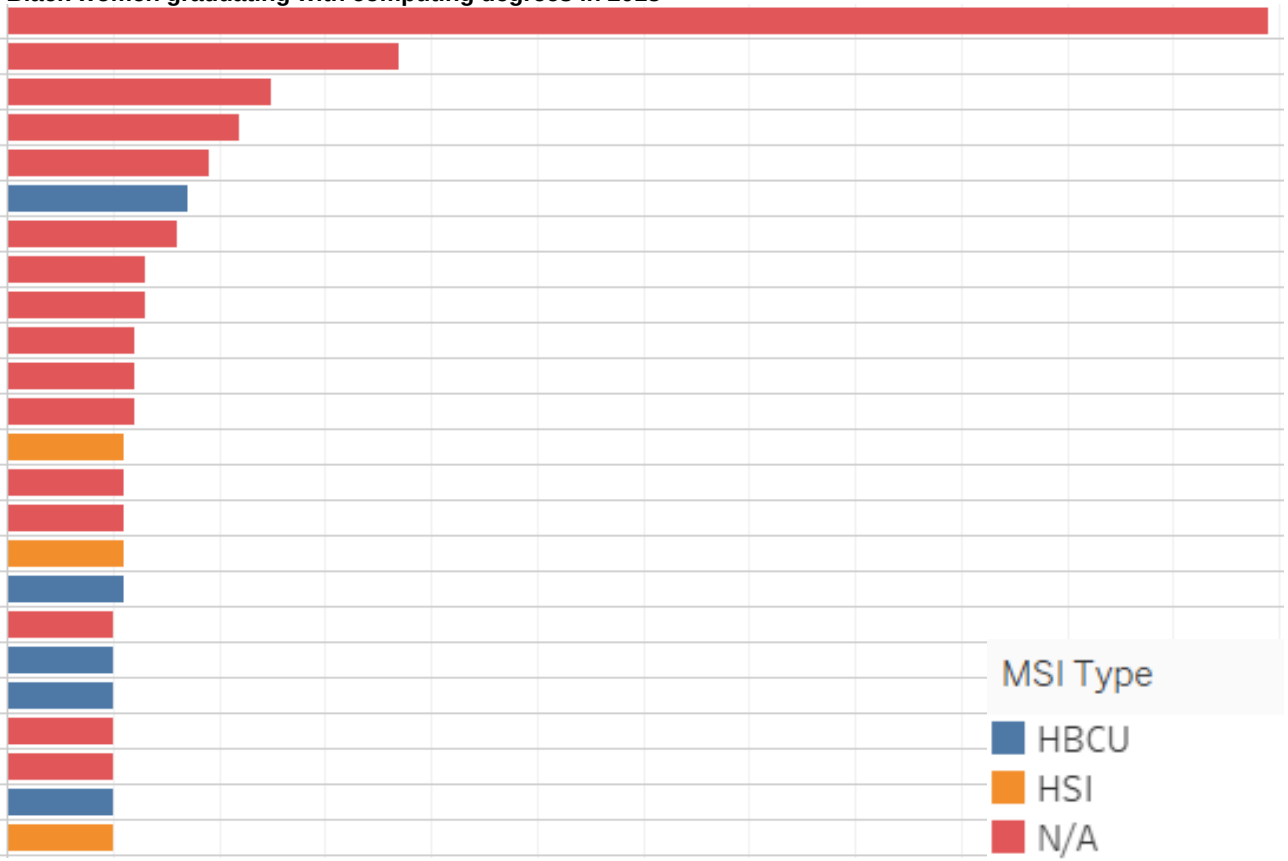
Which universities are producing the most BLNA women graduating with computing degrees?

How do graduation rates change at a given university after RTC programs begin engaging students there?

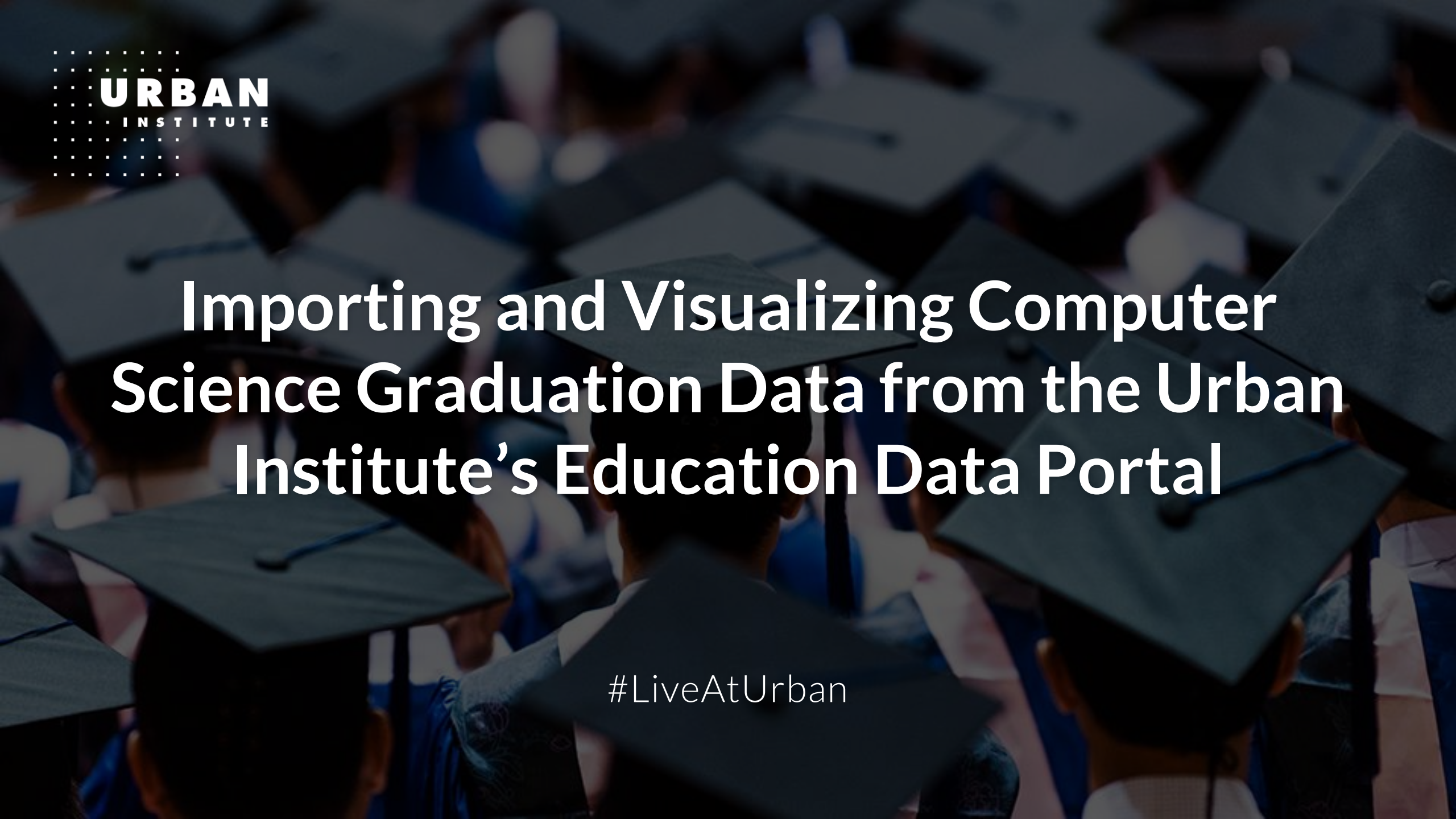
REBOOT REPRESENTATION

Only 5 out of the 24 institutions with 10 or more Black women graduating with computing bachelor degrees are HBCUs

Institution	State	Number of Black women graduating with computing degrees in 2018
University of Maryland-University College	MD	119
Georgia State University	GA	37
Kennesaw State University	GA	25
University of North Carolina at Greensboro	NC	22
University of Maryland-College Park	MD	19
Alabama A & M University	AL	17
Towson University	MD	16
Virginia Commonwealth University	VA	13
University of Maryland-Baltimore County	MD	13
University of South Carolina-Upstate	SC	12
SUNY at Albany	NY	12
Florida State University	FL	12
University of Houston	TX	11
Troy University	AL	11
George Mason University	VA	11
CUNY Lehman College	NY	11
Alabama State University	AL	11
University of North Carolina at Charlotte	NC	10
Spelman College	GA	10
North Carolina A & T State University	NC	10
Lindenwood University	MO	10
Georgia Gwinnett College	GA	10
Florida Agricultural and Mechanical Univers..	FL	10
Broward College	FL	10



SOURCE: National Center for Education Statistics (IPEDS), 2017-2018 Final Release Data



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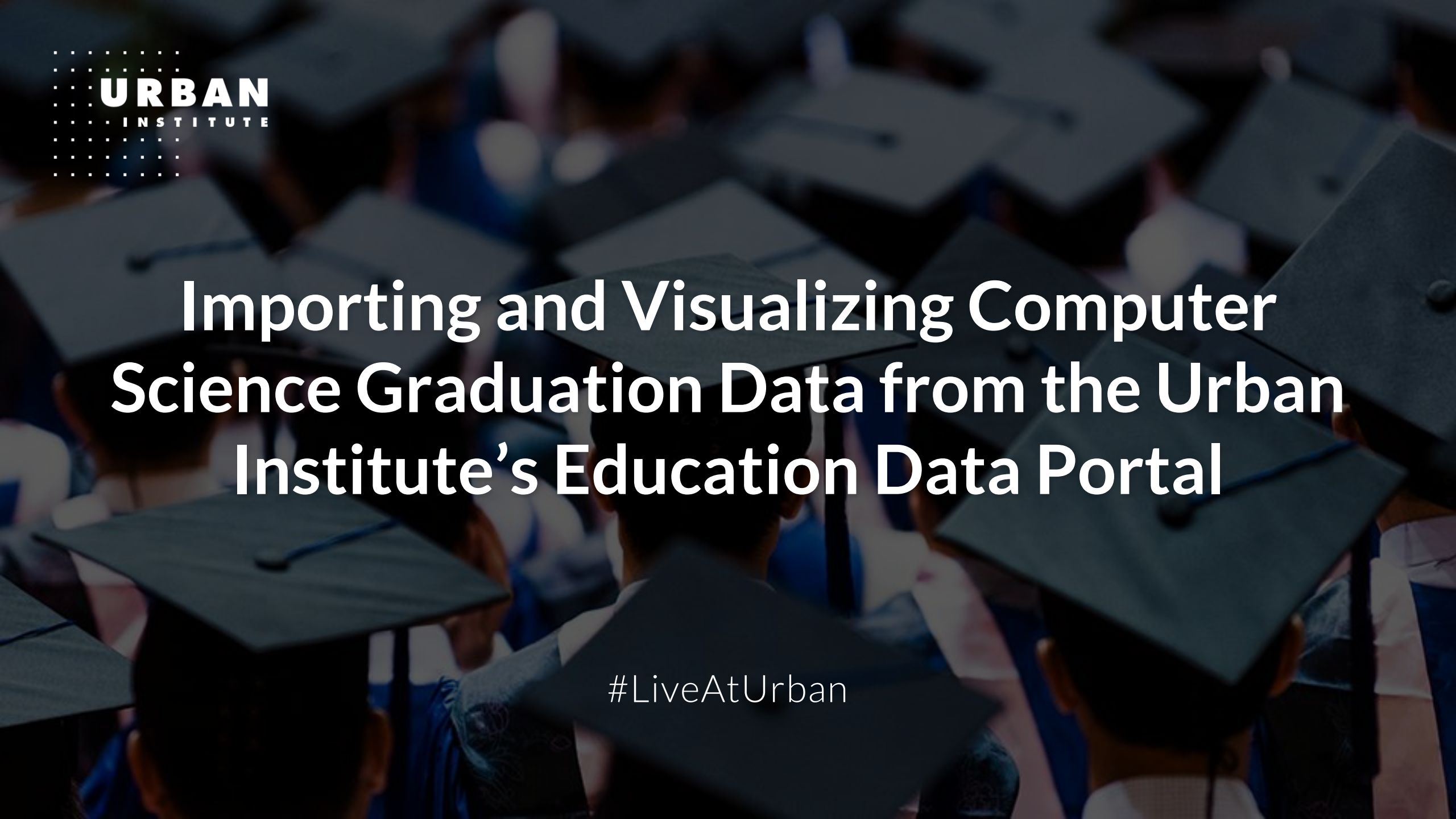
Release information

- Tool will be made public, along with documentation & source code, in late February
- Tool will be accessible from the Tableau Connector Community Page
- Goals for future:
  - Expand amount of IPEDS data pulled; remove limit on years and FIPS
  - Pull various data sets from education data portal



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