

Combining Federal Data Sets with Institution Data

Jason Wang, PhD, IRP DATA MANAGEMENT SPECIALIST, GEORGIA TECH

Sandra Kinney, DPA, SENIOR DIRECTOR OF IRP, GEORGIA TECH

Why Use External Data Sets?

- Publicly available
- Provide context for your institution's data
- Inform internal strategic decision making
- Enhance public-facing institutional marketing and materials

What Federal Data Have You Used?



Overview

- Research & Development
- Student Financial Aid
- Faculty Salary
- Staff Equity
- Academic Program Supply and Demand

Session Objectives

By the end of this session, we will have...

- **Showcased** several examples of combining federal data sets with institution data
- **Demonstrated** the potential value added by combining federal data sets with institution data
- **Provided** a selection of federal data sets

Ask Yourself...

- What data is available and relevant to my institution?
- Where can I find the data?
- How does the data provide context for my institution?
- How can I present the data meaningfully?

Research & Development

Data Sources



- Federal Data Set
 - NSF Higher Education Research and Development (HERD) Survey
 - <https://ncesdata.nsf.gov/ids/herd>
- Institution Data
 - The data pulled to complete NSF HERD Survey

Research & Development

External Benchmarking

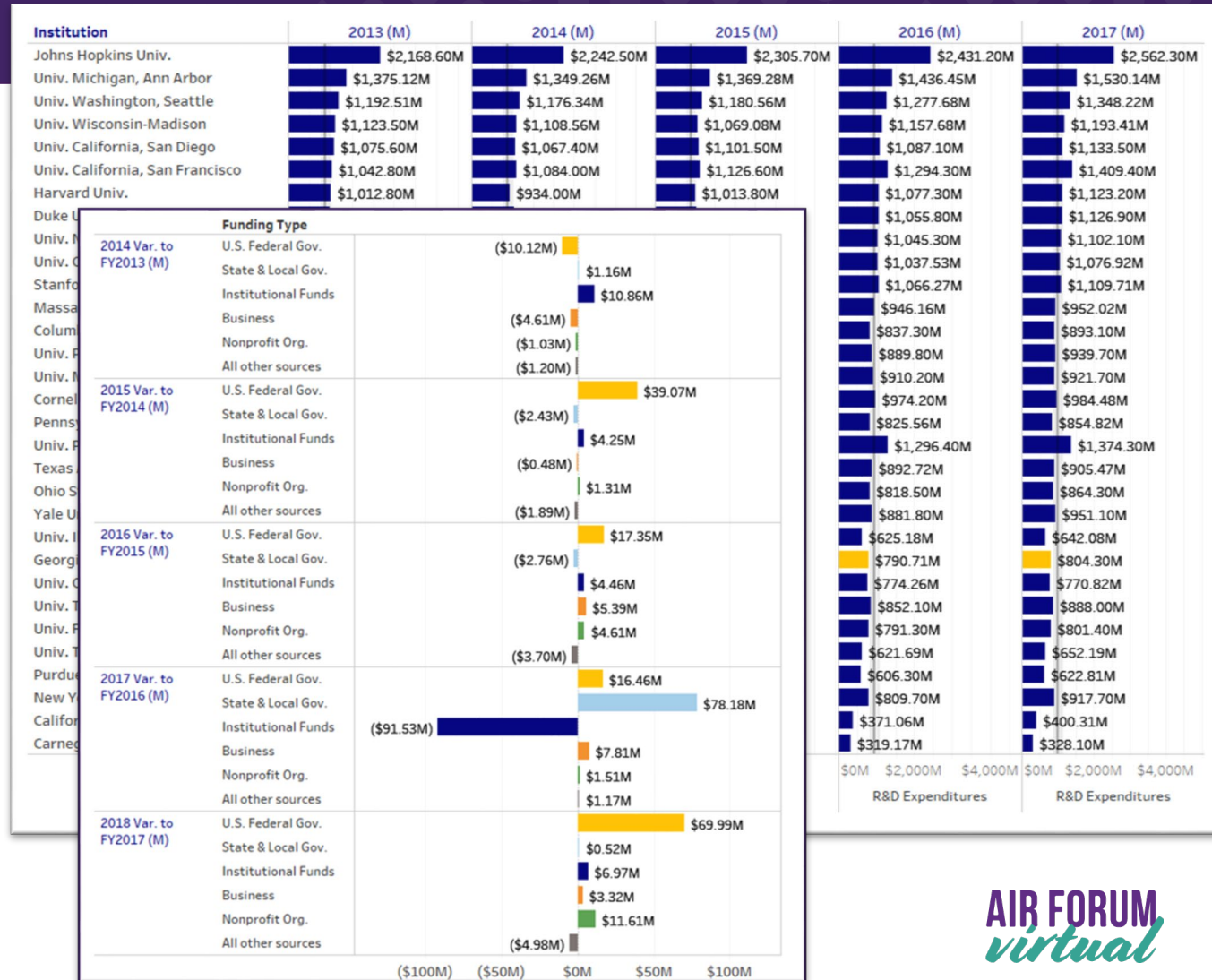
How do we compare to our peer institutions?

Internal Decision Making

Where are there opportunities for growth in research?

Public-facing Marketing

How can we emphasize Georgia Tech's research strengths?



Research & Development



Student Financial Aid

Data Sources



- Federal Data Sets
 - IPEDS (IC, SFA)
 - <http://nces.ed.gov/ipeds>
 - HUD Fair Market Rent
 - <https://www.huduser.gov/portal/datasets/fmr.html>
 - USDA Food Plans Cost
 - <https://www.fns.usda.gov/cnp/p/usda-food-plans-cost-food-reports-monthly-reports>
- Institution Data
 - Financial Aid budget amounts from FA Office

Student Financial Aid

External Benchmarking

How do we compare to our peer institutions?

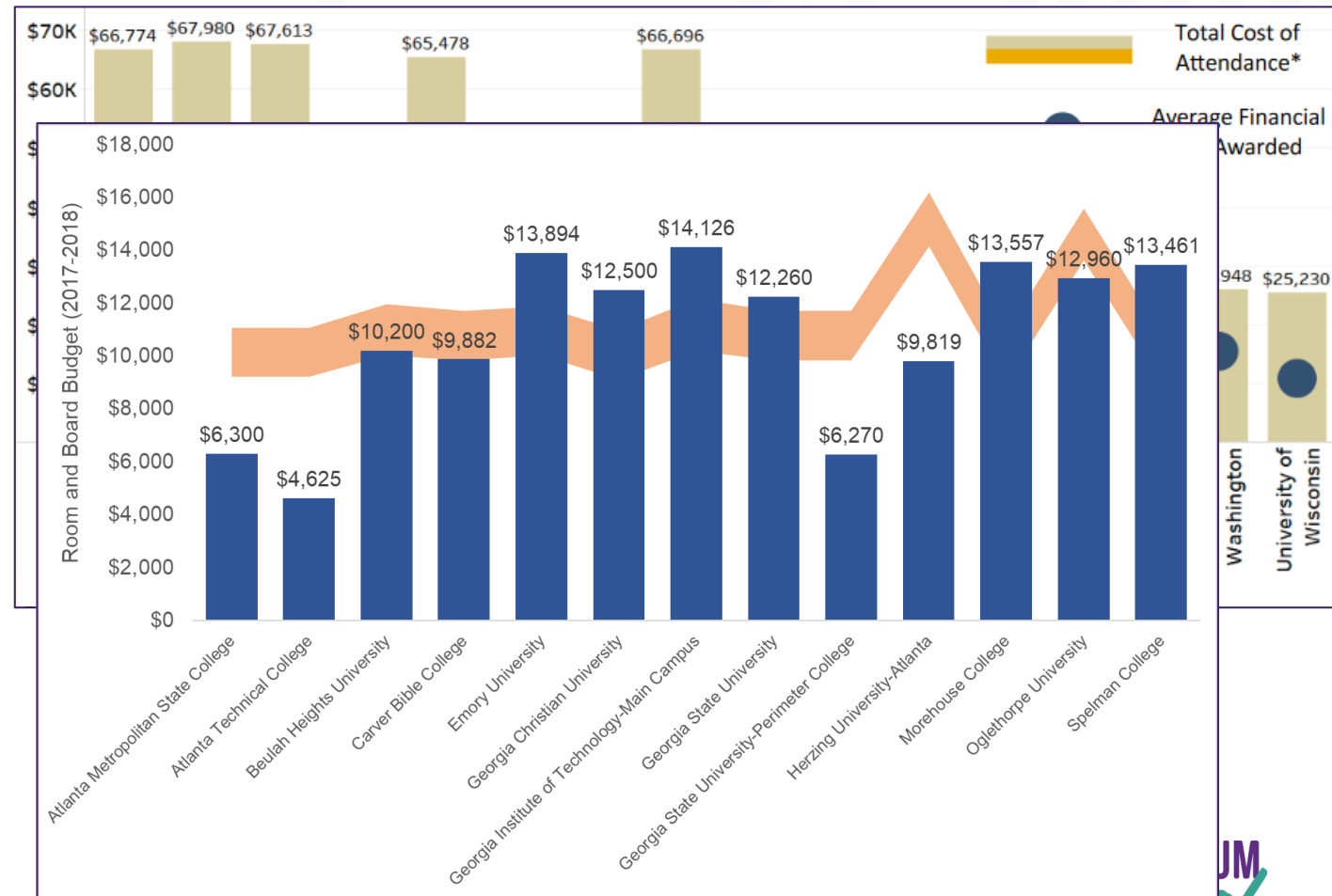
Is our budget for room and board in line with other Atlanta institutions?

Internal Decision Making

Where are there opportunities to better assist students?

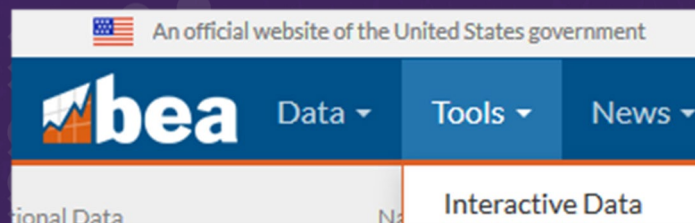
Public-facing Marketing

How can we tell the best story for prospective students?



Faculty Salary

Data Sources



- Federal Data Sets
 - IPEDS: Use the Data
 - <https://nces.ed.gov/ipeds/use-the-data>
 - Bureau of Economic Analysis (BEA): Interactive Data
 - <https://apps.bea.gov/itable/index.cfm>
- Institution Data
 - The data pulled and submitted to IPEDS

Faculty Salary

External Benchmarking

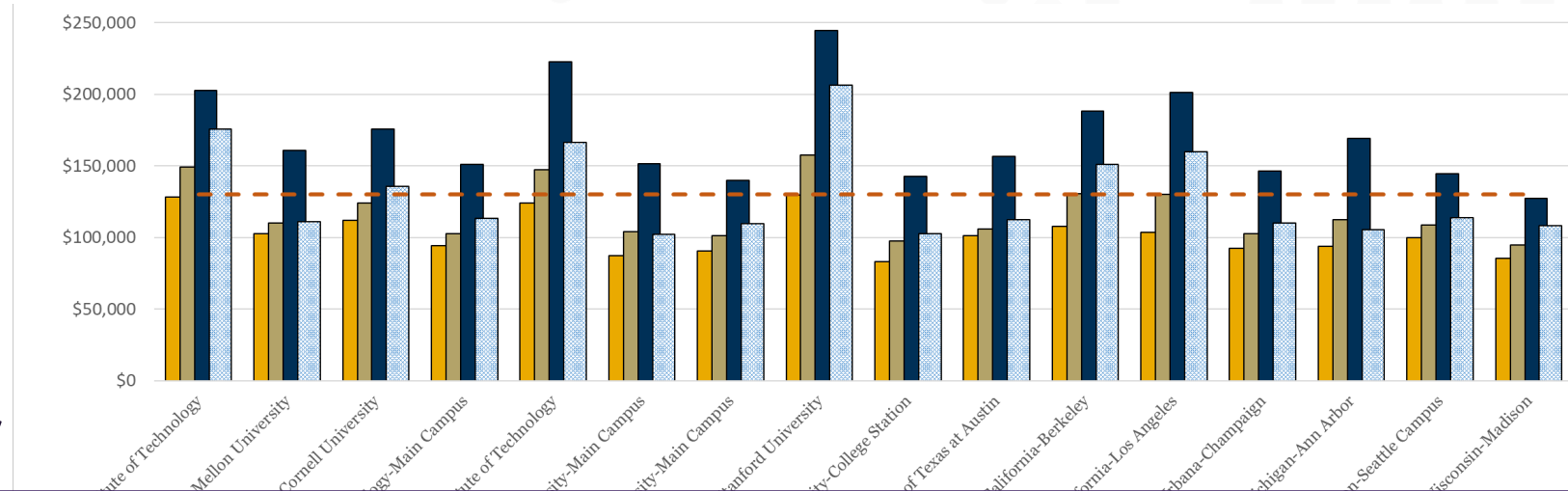
How do we compare to our peer institutions?

Internal Decision Making

How can this influence faculty recruitment, retention, and promotion?

Public-facing Marketing

How can we highlight the advantages of working at Georgia Tech?



AVERAGE FACULTY SALARY ADJUSTED FOR REGIONAL PRICE PARITIES***															
Stanford University	Massachusetts Institute of Technology	California Institute of Technology	University of Michigan-Ann Arbor	University of California-Los Angeles	Carnegie Mellon University	Georgia Institute of Technology-Main Campus	The University of Texas at Austin	University of California-Berkeley	Purdue University-Main Campus	Cornell University	Pennsylvania State University-Main Campus	University of Illinois at Urbana-Champaign	University of Washington-Seattle Campus	Texas A & M University-College Station	University of Wisconsin-Madison
\$154,971	\$152,775	\$139,903	\$134,171	\$126,779	\$126,419	\$125,841	\$125,121	\$124,242	\$122,405	\$118,759	\$116,035	\$115,049	\$111,484	\$111,289	\$110,478

*** "Regional Price Parities (RPPs) measure the differences in price levels across states and metropolitan areas for a given year and are expressed as a percentage of the overall national price level." (U.S. Bureau of Economic Analysis)

Faculty Salary

Rankings



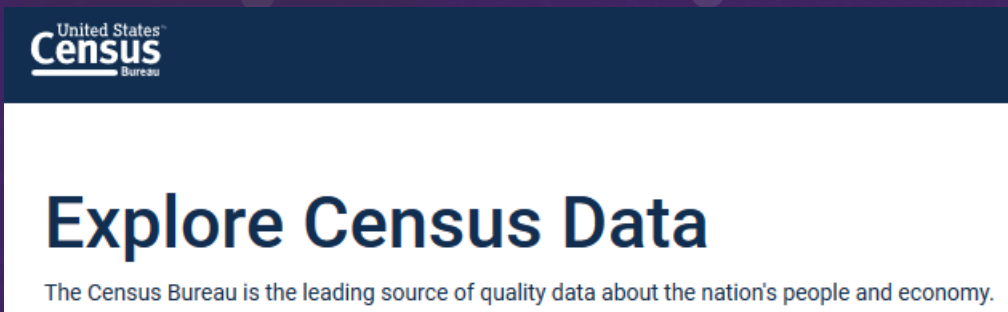
“Faculty salary is weighted at 7% and is the average faculty pay plus benefits during the 2017-2018 and 2018-2019 academic years, adjusted for regional differences in the cost of living. Nonresponders to the faculty salary question for the first time had modified federal government faculty salary data used as the basis for their estimates. **Also new for the 2020 rankings, the faculty salary figures were adjusted using open source data from the Bureau of Economic Analysis regional price parities 2017 dataset published in May 2019.** These regional price indexes allow comparisons from one metro area to another and measure the differences in price levels across states and metropolitan areas for a given year. They are expressed as a percentage of the overall national price level. The regional price indexes cover all consumption goods and services, including housing rents.”

Staff Equity

Data Sources



Living Wage | calculator



- Federal Data Sets
 - IPEDS: Use the Data
 - <https://nces.ed.gov/ipeds/use-the-data>
 - US Census Data
 - <https://data.census.gov/cedsci/>
 - Living Wage Data
 - <https://livingwage.mit.edu/>
- Institution Data
 - The data pulled and submitted to IPEDS
 - Data from HR

Staff Equity

External Benchmarking

How do we compare to our peer institutions?

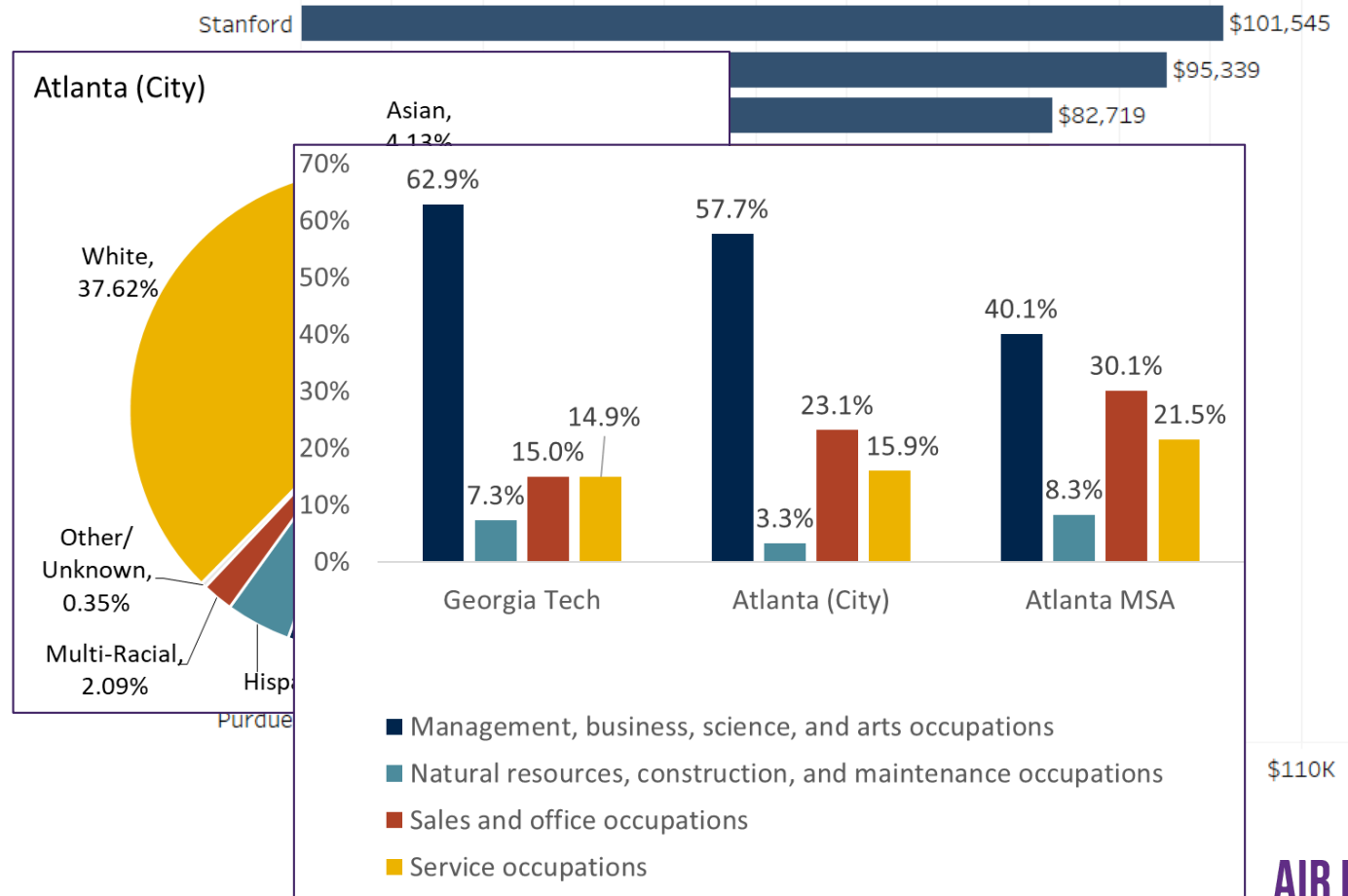
How do we compare to the local area?

Internal Decision Making

Are there any equity issues that need to be addressed?

Public-facing Marketing

How can we highlight the advantages of working at Georgia Tech?



\$110K

Academic Program Supply & Demand

Data Sources

The logo for EDEPS (Educational Data and Employment Program System) is displayed in a blue rectangular box with a purple shadow effect. The text "EDEPS" is in a bold, white, sans-serif font.A screenshot of the Bureau of Labor Statistics website. The top navigation bar is dark red with white text. It includes the United States Department of Labor logo and the text "UNITED STATES DEPARTMENT OF LABOR" and "BUREAU OF LABOR STATISTICS". Below the navigation bar is a white header with the text "Occupational Employment Statistics".

UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS
Home ▾ Subjects ▾ Data Tools ▾ Publications ▾ Economic I
Occupational Employment Statistics

- External Data Sets
 - EDEPS (uses several Federal data sets)
 - <https://www.edeps.org/>
 - Bureau of Labor Statistics (BLS)
 - <https://data.bls.gov/oes/#/home>
- Institution Data
 - Current programs
 - Possible new programs
 - Proposed new programs

Academic Program Supply & Demand

External Benchmarking

What is our market share of program completers?

What is the demand for program completers?

Internal Decision Making

Does the market suggest the need to discontinue a program?

Does the market suggest the need to create a new program?

Public-facing Marketing

How does the institute maintain its competitiveness in the market?

14.0501 Bioengineering and Biomedical Engineering (Georgia)															
Market Share				Program Completers											
				2012-13		2013-14		2014-15		2015-16		2016-17			
Institution				M	W	Total	M	W	Total	M	W	Total	M	W	Total
				255	130	127	257								
				2	2	0	2								
				27	17	19	36								
				5	6	0	6								
				34	25	19	44								
				20	10	12	22								
				37	18	16	34								
				57	28	28	56								
				346	183	174	357								

Occupational Characteristics Georgia/United States							
Georgia				United States			
SOC Code	Occupation	Growth Rate 2016-26	Median Annual Wage	Typical Education	Work Experience	Typical Training	Pct Self Empl
17-2031	Biomedical Engineers	As fast as the average	\$78,520	Bachelor's degree	None	None	N/A

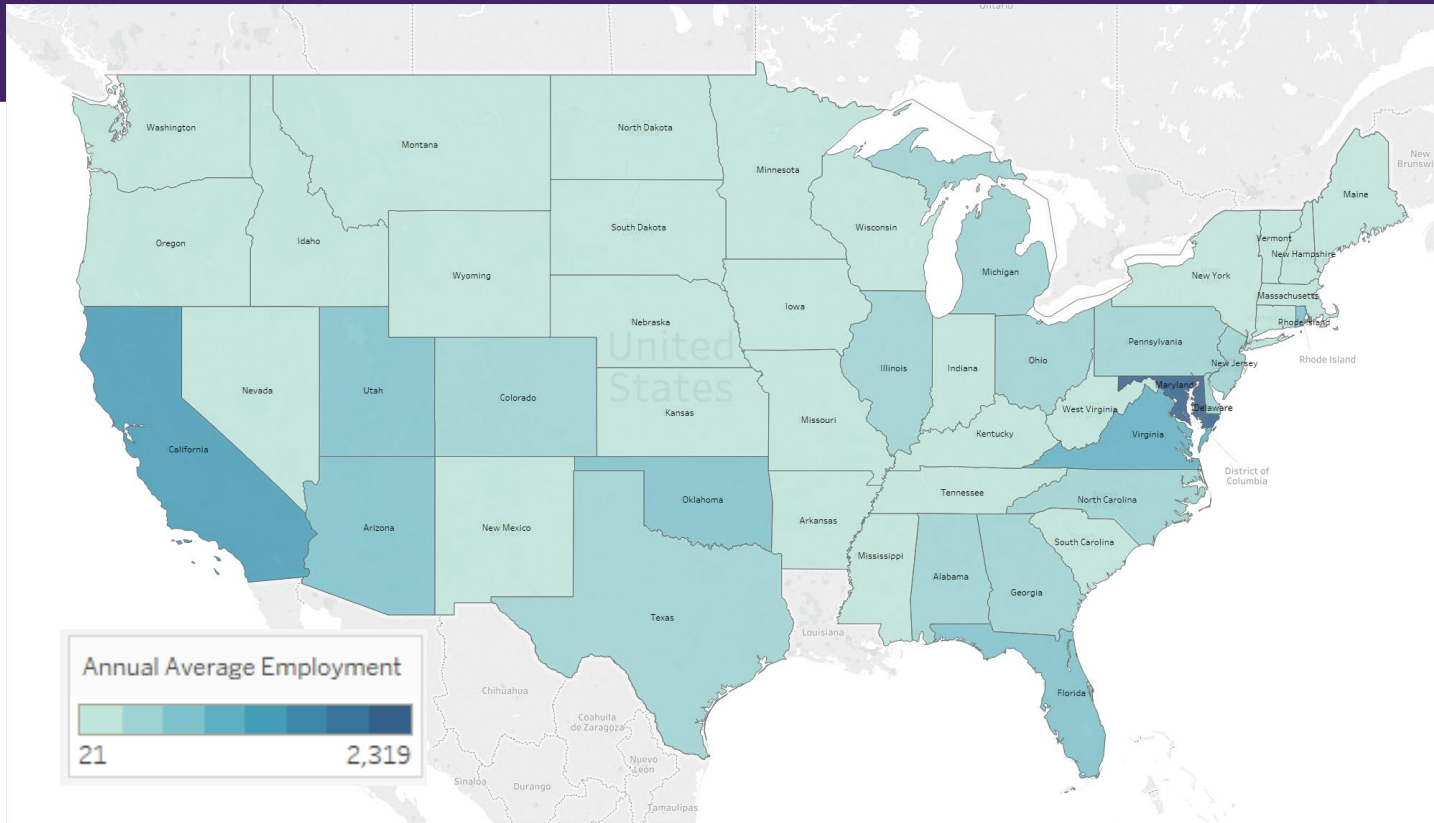
• Long-term OJT (on-the-job training): more than 1 year • Moderate-term OJT: 1-12 months • Short-term OJT: 1 month or less

Occupational Projections Georgia						
		Employment		Change 2016-26		Average
SOC Code	Occupation	Base 2016	Proj 2026	Number	Percent	Annual Openings
17-2031	Biomedical Engineers	330	380	50	13.3%	30

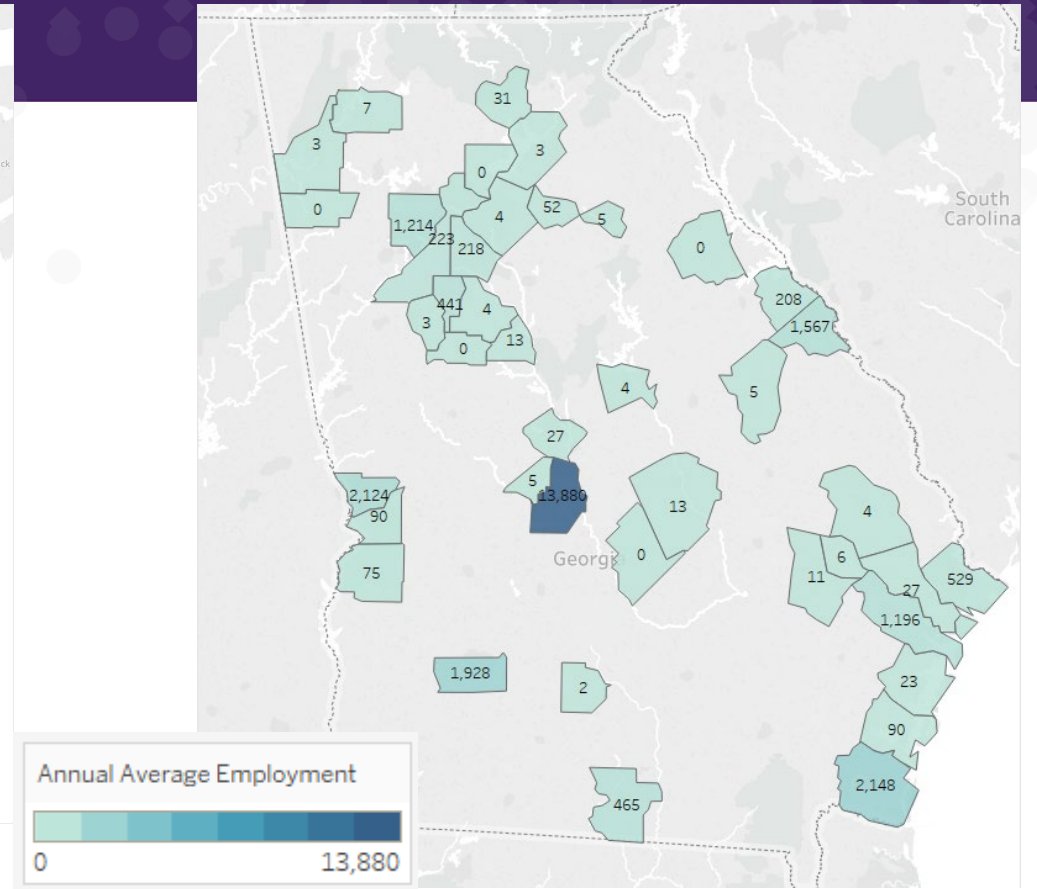
Wage Trends (Median) Georgia							
		Median Annual Wage					Change
SOC Code	Occupation	2014	2015	2016	2017	2018	2014 to 2018
17-2031	Biomedical Engineers	\$74,950	\$63,090	\$62,360	\$68,420	\$78,520	4.8%

Benchmarks for Wage Trends (all occupations) Georgia							
		2014	2015	2016	2017	2018	Change 2014 to 2018
Georgia Median Wage		\$32,840	\$33,430	\$34,330	\$35,040	\$35,950	9.5%
Georgia Mean Wage		\$44,670	\$45,420	\$46,540	\$47,200	\$48,280	8.1%
Georgia Mean Wage RSE		0.6%	0.5%	0.5%	0.5%	0.5%	
National Median Wage		\$35,540	\$36,200	\$37,040	\$37,690	\$38,640	8.7%
National Mean Wage		\$47,230	\$48,320	\$49,630	\$50,620	\$51,960	10.0%
National Mean Wage RSE		0.1%	0.1%	0.1%	0.1%	0.1%	
National Consumer Price Index C-CPI-U		135.5	135.4	136.7	139.0	141.9	4.7%

Academic Program Supply & Demand



United States				
	2015	2016	2017	2018
Annual Average Establishments	1,043	1,029	1,002	995
Annual Average Employment	191,283	193,099	192,375	193,802
Average Annual Pay	\$ 41,908.33	\$ 42,489.00	\$ 43,872.00	\$ 44,483.33



Georgia				
	2015	2016	2017	2018
Annual Average Establishments	66	65	46	45
Annual Average Employment	13,508	13,497	13,368	13,669
Average Annual Pay	\$ 51,163.50	\$ 51,114.00	\$ 54,823.00	\$ 54,392.50

Big Picture

Research & Development

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**Academic Program Supply
and Demand**

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