

Putting Workforce Development Goals into Action: Labor Market Data Access and Literacy

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Presenting Today



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Session Agenda

- USG and Institute of Government partnership
- In-demand jobs
- Data tools to inform program development
- Training campus leaders on labor market alignment
- Wage and labor market outcomes
- Utilizing data tools to inform economic development efforts in Georgia



USG & Institute of Government Partnership



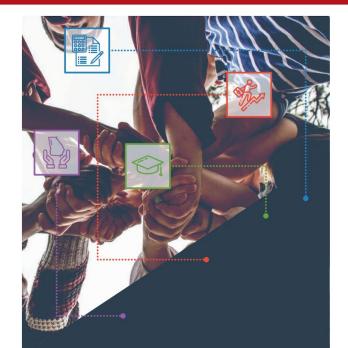
UNIVERSITY SYSTEM OF GEORGIA

- Governing Board
- 26 four-year institutions with varying analytic capacity
- Robust system longitudinal data



- Applied research expertise (workforce and economic development, labor market data, higher education)
- Data scientists and analysts
- Data visualization infrastructure





University System of Georgia Strategic Plan 2024

"Institutions must build more partnerships with both local officials as well as Georgia business and economic development leaders and seek their input about educational programs and what knowledge and skills students need to be successful [in order to] improve the alignment of our degree programs with industry demands and focus on our communities' need for talent."

USG 2024 Strategic Plan

Approved January 2020



Alignment is Based on Information

- For system office and institutions
 - What new programs should we offer? How aligned are my current programs?
- For local/state economic development and industry
 - Is the talent pipeline sufficient and diverse?
- For students
 - In what area should I pursue postsecondary education?



In-Demand Jobs Report





In-Demand Jobs Report Overview

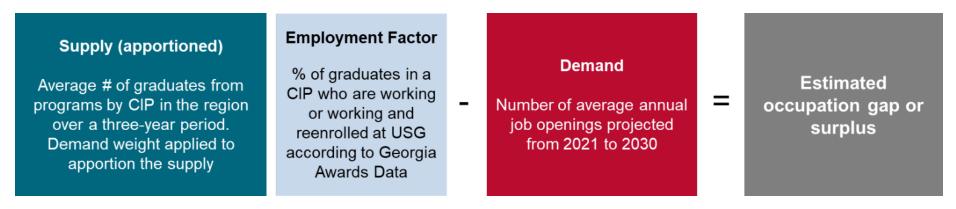
Goals

- Put additional data tools into the hands of campus leaders
- Develop analytics and resources that can help students make informed decisions
- Create a common language for discussing in-demand jobs in Georgia

Major Components

- Supply and Demand Analysis (Gaps)
- In-Demand Jobs List

Supply and Demand Analysis Methodology



For additional information on program gap analysis methodologies, see C.A. Goldman and D.G. Carew. 2018. Using Workforce Data to Plan Higher Education Degree Programs. In *Handbook on the Politics of Higher Education* (pp. 280–297). Cheltenham, UK: Edward Elgar; K. Perez-Vergara, R. Lathrop, and M. Orlowski. 2018. Community College Program Planning: A Method to Measure and Meet Community Need. *Community College Journal of Research and Practice* 42(3): 204–217.



State Gap Analysis Example Results

Table 2. Detailed Statewide Gap Analysis (Top 30)

			····· · ······	
SOC	Detailed Occupation	Supply	Avg. Annual Openings	Shortage
13–1198	Project Management Specialists and Business Operations Specialists, All Other	1,747	5,927	(4,179)
25–3097	Tutors and Teachers and Instructors, All Other	53	3,209	(3,156)
13-2011	Accountants and Auditors	874	3,612	(2,738)
15–1256	Software Developers and Software Quality Assurance Analysts and Testers	1,839	4,510	(2,672)
13–1071	Human Resources Specialists	561	2,624	(2,063)
25–2021	Elementary School Teachers, Except Special Education	1,327	3,290	(1,963)
25–2022	Middle School Teachers, Except Special and Career/Technical Education	434	2,203	(1,769)
13-1161	Market Research Analysts and Marketing Specialists	1,074	2,744	(1,670)
13–1111	Management Analysts	805	2,118	(1,313)
15–1211	Computer Systems Analysts	318	1,535	(1,217)
13–1151	Training and Development Specialists	29	1,240	(1,211)
13–1028	Buyers and Purchasing Agents	158	1,267	(1,108)
41–3031	Securities, Commodities, and Financial Services Sales Agents	-	1,089	(1,089)
EORGIA IN-DE	MAND JOBS REPORT WINTER 2022			



In-Demand Jobs List Criteria

Total of 152 occupations that require typical BA education and less than 5 years experience

Occupation must meet the following criteria:

- 1. Wage: Median wage of all occupations: \$44,429
- 2. Employment: Minimum of 2,371 jobs

>0.05% of total 2021 employment

Total of over 4.7M jobs in Georgia

3. Growth: Positive rate projected 2021-2030



Regional In-Demand List Example

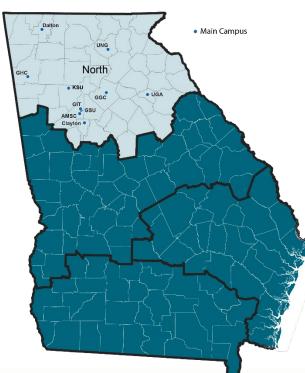


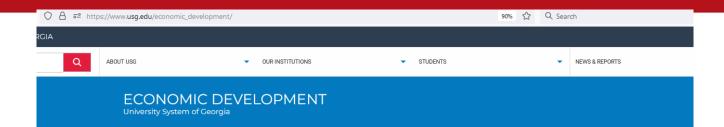
Table NG4. Regional Gap Analysis (Top 20)

SOC	Description	Avg. Annual Openings	Supply Estimate	Shortage
13-1198	Project Management Specialists and Business Operations Specialists, All Other	4,245	985	-3,260
15-1256	Software Developers and Software Quality Assurance Analysts and Testers	3,600	991	-2,609
13-2011	Accountants and Auditors	2,685	455	-2,230
25-3097	Tutors and Teachers and Instructors, All Other	2,091	8	-2,083
13-1161	Market Research Analysts and Marketing Specialists	2,141	472	-1,669
13-1071	Human Resources Specialists	1,819	283	-1,536
25-2021	Elementary School Teachers, Except Special Education	2,167	647	-1,521
29-1141	Registered Nurses	2,793	1,349	-1,444
25-2022	Middle School Teachers, Except Special and Career/Technical Education	1,499	253	-1,246
13-1111	Management Analysts	1,614	434	-1,180
15-1211	Computer Systems Analysts	1,196	159	-1,037
15-1299	Computer Occupations, All Other	1,106	197	-909
41-3031	Securities, Commodities, and Financial Services Sales Agents	869	-	-869
13-1151	Training and Development Specialists	853	5	-848

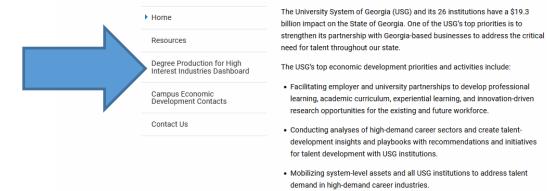


Degree Production in High Interest Career Areas





Aligning Talent Demand with Talent Development



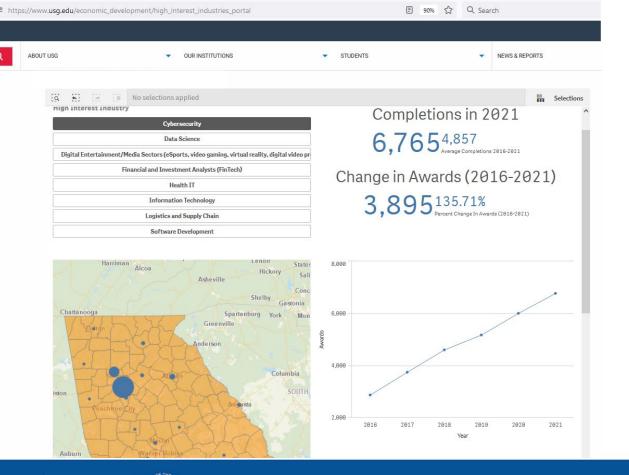
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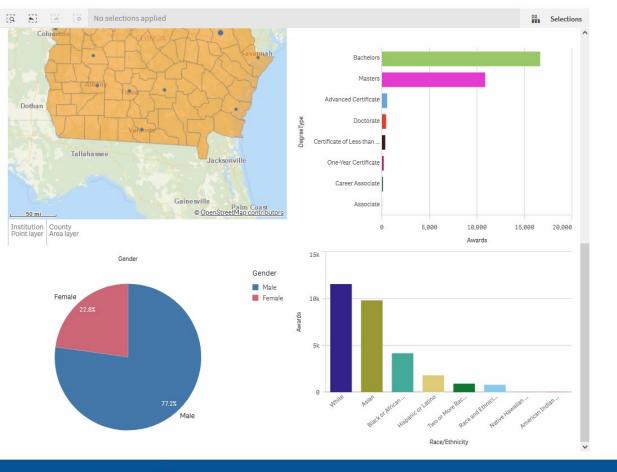




This interactive data visualization shows the number, race, gender, and degree level of graduates in USG academic programs for the past four years that map to high interest industry sectors in Georgia.



https://www.usg.edu/economic_development/high_interest_industries_portal



Users can click on the visualizations to filter data by location, degree level, race/ethnicity, gender, and age.



https://www.usg.edu/economic_development/high_interest_industries_portal

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New Academic Program Proposals to the Board of Regents

Enhanced Components

- Labor Market data 1
- **Occupational Competencies** 2.
- Higher education market analysis 3.

It was critical to equip academic leaders with data tools and training to implement this new requirements.



Georgia DOL Occupation Projections 2028

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C E E E E Bachelor's de	lucati 🛛						Selec
Occupation Projections							
Statewide 🔻	2-Digit SOC	6-Digit SOC	Occupation Type	Occupations	Typical Education	Work Experience	Typical on-the-Job Training



Projections within State by SOC Occupation

Note - employment counts under 40 are suppressed by the GA DOL; totals from occupations will thus be less than totals from major groups and rates for combined LWDAs 10 and 11 cannot be calculated; Employment projections are rounded to the nearest ten; percentages of growth are based on unrounded figures.

	2-Digit SOC		6-Digit SOC	q	Q	Typical Q Education	Work experience in C a related	Typical on- the-job Q training	2018 Base Employment	2028 Projected Employment	Total Change in Employment	Percent Change Q in	Annual Growth Rate	Q,	Annual Labor Force Exits	Annual Occupational Transfers
		27	27-4032		Film and Video Editors	Bachelor's degree	None	None	1,300	1,880	580	44.70%	3.8	0%	40	110
		27	27-3091		Interpreters and Translators	Bachelor's degree	None	None	1,870	2,620	750	40.40%	3.5	0%	100	130
		15	15-1122		Information Security Analysts	Bachelor's degree	Less than 5 years	None	2,730	3,720	990	36.10%	3.1	0%	50	180
		27	27-4031		Camera Operators, Television, Video, and Motion Picture	Bachelor's degree	None	None	1,570	2,110	540	34.30%	3.0	0%	50	130
		15	15-2011		Actuaries	Bachelor's degree	None	Long-term on-the- job training	200	260	60	33.30%	2.9	0%	*	10
		27	27-1027		Set and Exhibit Designers	Bachelor's degree	None	None	560	740	180	31.40%	2.8	0%	20	40
		13	13-1161		Market Research Analysts and Marketing Specialists	Bachelor's degree	None	None	20,000	25,570	5,570	27.80%	2.5	0%	540	1,790
		21	21-1018		Substance Abuse, Behavioral Disorder, and Mental Health Counselors	Bachelor's degree	None	None	6,560	8,390	1,830	27.90%	2.5	0%	240	520
ulton		27	27-1022		Fashion Designers	Bachelor's degree	None	None	450	570	120	27.70%	2.5	0%	20	30
		11	11-3031		Financial Managers	Bachelor's degree	5 years or more	None	18,040	22,770	4,730	26.20%	2.4	0%	440	1,130
Q, nin,		11	11-9111		Medical and Health Services Managers	Bachelor's degree	Less than 5 years	None	9,160	11,610	2,450	26.70%	2.4	0%	260	570
, Id		15	15-1132		Software Developers, Applications	Bachelor's degree	None	None	28,170	35,550	7,380	26.20%	2.4	0%	440	1,800
,		17	17-1021		Cartographers and Photogrammetrists	Bachelor's degree	None	None	170	210	40	26.70%	2.4	0%	10	10
		15	15-2031		Operations Research	Bachelor's degree	None	None	3,370	4,210	840	25.00%	2.3	0%	90	160

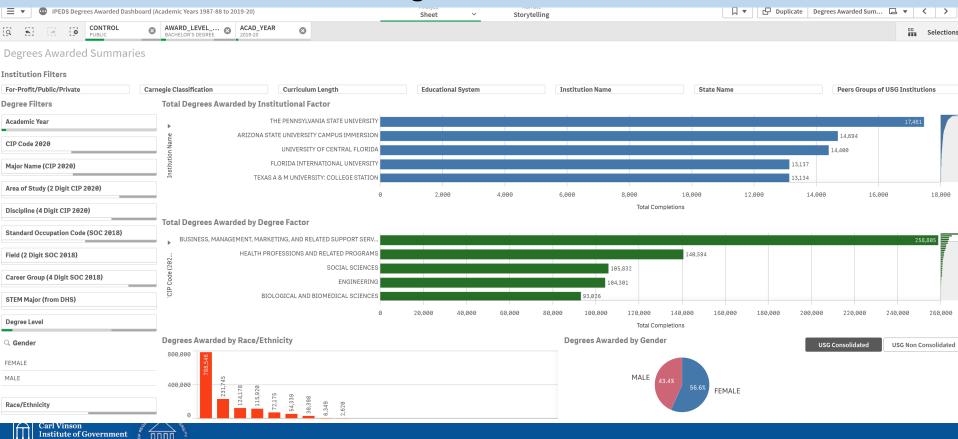
Description of LWD Areas

LWDA 3 is City of Atlanta limits; LWDA 6 is north and south Fulton

Included Counties	Q
Bartow, Catoosa, Chattooga, Dade, Fannir Floyd, Gilmer, Gordon, Haralson, Murray, Paulding, Pickens, Polk, Walker, Whitfield	١,
Banks, Dawson, Forsyth, Franklin, Habersham, Hall, Hart, Lumpkin, Rabun, Stephens, Towns, Union, White	
Cobb	
	Bartow, Catoosa, Chattooga, Dade, Fannir Floyd, Gilmer, Gordon, Haralson, Murray, Paulding, Pickens, Polk, Walker, Whitfield Banks, Dawson, Forsyth, Franklin, Habersham, Hall, Hart, Lumpkin, Rabun, Stephens, Towns, Union, White



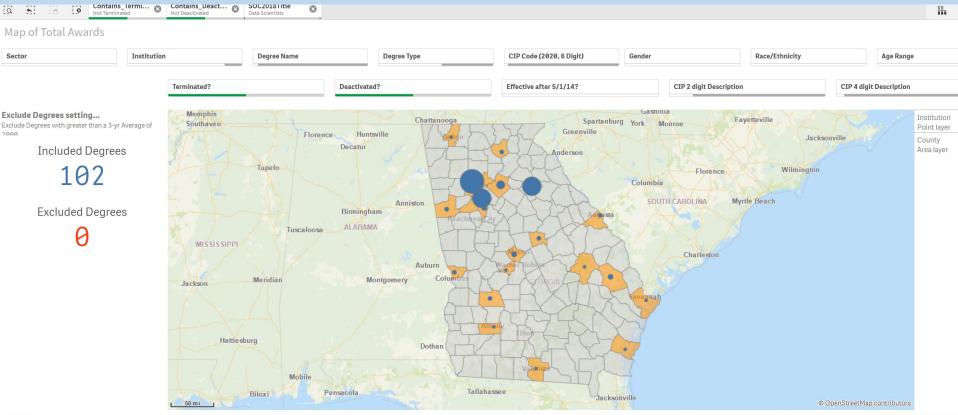
IPEDS Degrees Awarded Data



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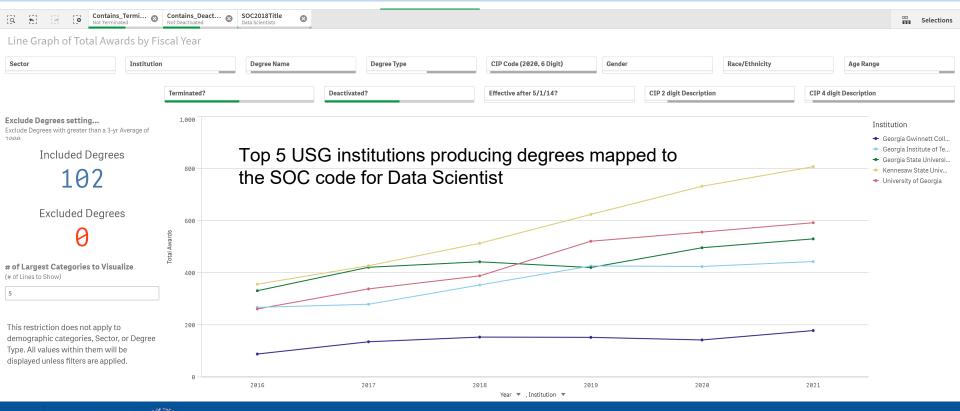
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USG Degrees Awarded by Program: Data Science Related CIPs





USG Degrees Awarded by Program: Data Science Related CIPs, Top 5



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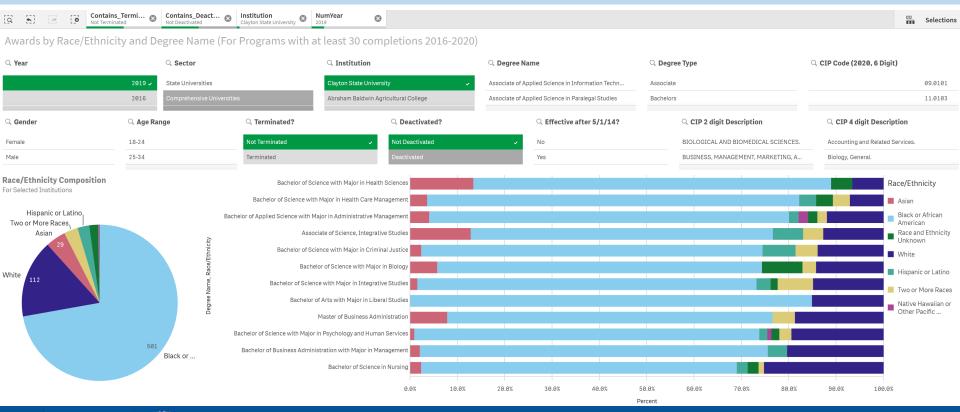
USG Degrees Awarded by Program

Awards by Fiscal Year (Original 407b Report)

Sector	Institution	De	gree Name	Degree Ty	vpe	CIP Code	(2020, 6 Digit)	Gender		Race/Ethnicity			Age Rang	e	
		Terminated?		Deactivated?		Effective a	fter 5/1/14?		CIP 2 digit Descriptio	n	C	IP 4 digit D	escription		
Exclude Degrees setting Exclude Degrees with greater than a 3-yr Ave	erage of	Sector	Q. Institution	Q	Degree Type	Q	Degree Abbre Q	Degree Name	Q	CIP Code (2020, 6 Digit) Q	FY16 Awards	FY17 Awards	FY18 Awards	FY19 Awards	FY20 Awards
2000		Totals									59,131	62,368	65,146	66,947	70,163
Included Degrees		Research Universities	Georgia State Univ	versity	Associate		ASCC	Associate of Science, Co	ore Curriculum	24.0101	1,544	1,529	1,582	1,843	1,969
		Research Universities	Georgia Institute o	of Technology	Masters		MSCS	Master of Science in Cor	nputer Science	11.0101	249	583	940	1,114	1,605
2,203		Research Universities	Georgia Institute o	of Technology	Bachelors		BSCS	Bachelor of Science in C	omputer Science	11.0101	365	458	597	617	706
2,205		Research Universities	University of Georg	University of Georgia E			BBA	Bachelor of Business Administration with Major in Finance		52.0801	507	583	567	614	606
Excluded Degrees		Research Universities	Georgia Institute o	of Technology	Bachelors		BSME	Bachelor of Science in M	lechanical Engineering	14.1901	510	594	499	551	572
Excluded Degrees		State Colleges	Georgia Highlands	College	Associate		ASCC	Associate of Science, Co	ore Curriculum	24.0101	346	409	449	466	560
A		Research Universities	University of Georg	gia	Bachelors		BS	Bachelor of Science with	n Major in Biology	26.0101	428	441	458	419	543
0		Research Universities	University of Georg	gia	Bachelors		BS	Bachelor of Science with	n Major in Psychology	42.0101	497	461	472	440	467
Awards Thresholds		State Universities	University of North	n Georgia	Associate		AACC	Associate of Arts, Core C Core Curriculum	Curriculum with Major in	24.0101	498	511	606	500	411
3 Year Averages below this threshold will b	be	Comprehensive Universities	Kennesaw State U	niversity	Bachelors		BS	Bachelor of Science with	n Major in Psychology	42.0101	246	295	356	366	390
highlighted in red		State Universities	University of North	n Georgia	Associate		ASCC	Associate of Science, Co Major in Core Curriculur		24.0101	345	431	472	413	387
Degree Type Q Totals	Thresh	State Colleges	Georgia Gwinnett	College	Bachelors		BBA	Bachelor of Business Ad in General Business	ministration with Major	52.0101	320	329	400	373	359
Advanced Certificate	-	Research Universities	Georgia Institute o	of Technology	Bachelors		BSBA	Bachelor of Science in B	usiness Administration	52.0201	397	369	348	361	339
Associate	< 5	Research Universities	Georgia Institute o	of Technology	Masters		MSANLT	Master of Science in Ana	alytics	52.1399	29	36	56	102	302
	<10	Research Universities	Georgia Institute o	of Technology	Bachelors		BSIE	Bachelor of Science in Ir	ndustrial Engineering	14.3501	393	401	337	356	395
Career Associate	<5	Research Universities	Georgia Institute o	of Technology	Masters		MSECE	Master of Science in Elec Engineering	ctrical and Computer	14.1001	457	311	354	350	395
Certificate of Less than One Year Doctorate	- <3	Research Universities	University of Georg	gia	Bachelors		BBA	Bachelor of Business Ad in Marketing	ministration with Major	52.1401	301	355	380	329	337
Education Specialist	<5	Comprehensive Universities	Kennesaw State U	niversity	Bachelors		BS	Bachelor of Science with	n Major in Integrative	30.9999	164	284	351	346	350

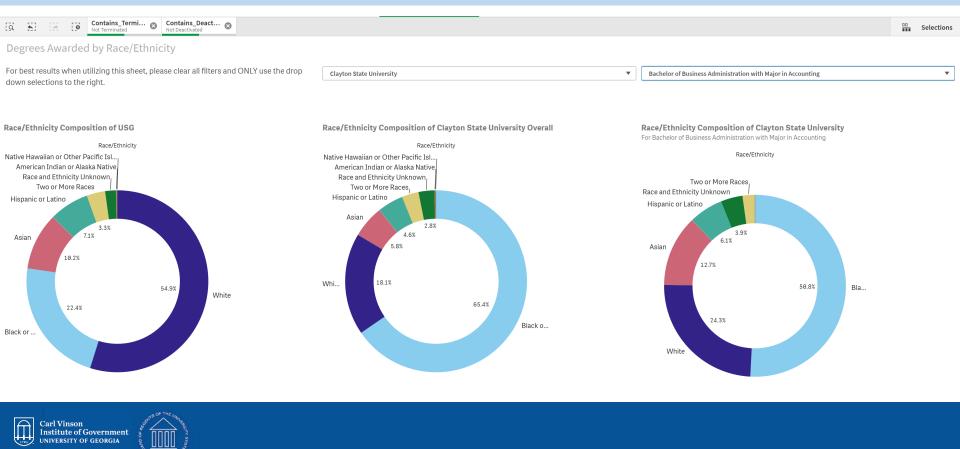


USG Degrees Awarded by Program: Race/Ethnicity by Programs





USG Degrees Awarded by Program: Race/Ethnicity Representation



Labor Market Data and Other Technical Assistance



Labor Market Information for Higher Education **Course Overview**

Day 1

- Orientation to labor market data organization
- Common labor market data source overview (QCEW, OnTheMap, Employment **Projections**)
- Case studies

Day 2

- Common labor market data sources overview cont. (O*Net, Longitudinal Data System, Demographic Data
- **CIP-SOC Crosswalk**
- USG tools
- JobsEQ report overview
- Section C



Common Data Tools Employed for Institutional Planning









Graduate Outcomes: Wage and Industry Information

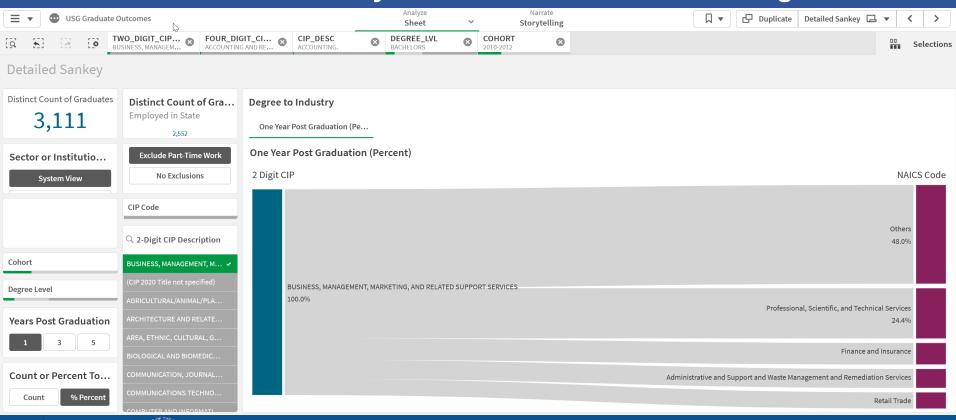


Developing Needs

- Governor's Office of Student Achievement, which administers GA•AWARDS SLDS, provides dashboard on earnings for 4-digit CIP
- Need for more granular academic program data plus industry outcomes to
 - Underpin academic program proposals and assessment
 - Advise students
- Joined Census Bureau Post-Secondary Employment Outcomes
- Published new Graduate Outcomes tool in USG Data Viz Portal

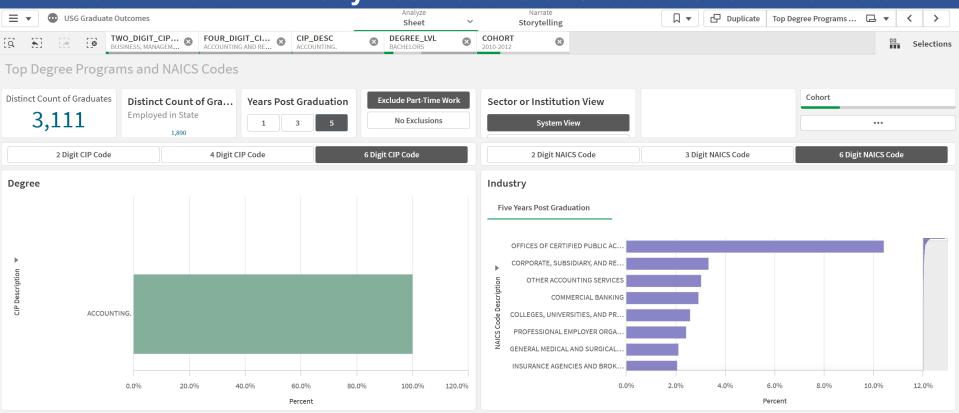


Data Viz Portal: Industry Destinations of Graduates - High Level



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Data Viz Portal: Industry Destinations of Graduates- Granular Data





Data Viz Portal: Earnings of Graduates-Broad Academic Areas

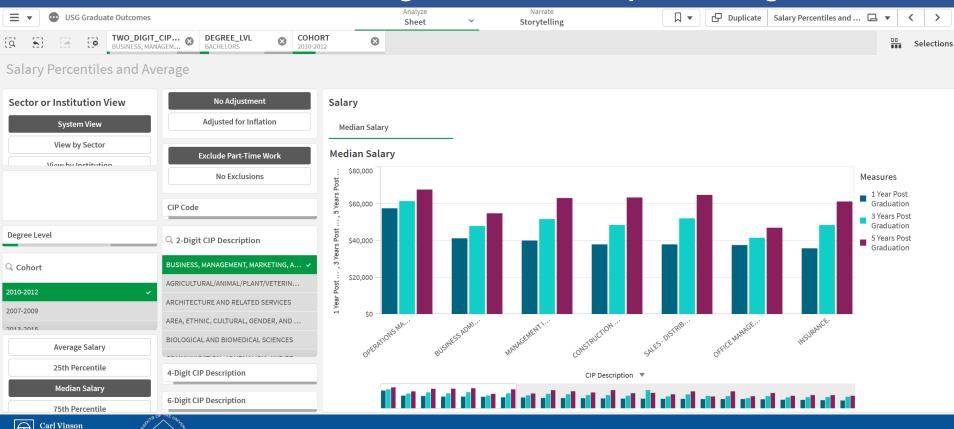
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[g] 🗄	3)	(Z	0	TWO_DIGIT_CIP SUSINESS, MANAGEM	DEGREE_LVL BACHELORS	8	COHORT 2010-2012	⊗								Sel	lectior	าร

Salary Percentiles and Average



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Data Viz Portal: Earnings of Graduates-Specific Programs



Institute of Government UNIVERSITY OF GEORGIA

Data Viz Portal: Earnings of Graduates-Specific Programs



Salary Percentiles and Average





	Data Viz Portal: Sta	atus of Graduates 1, 3,	and 5 Years Out
📃 🔹 🕒 USG Graduate	Outcomes	Analyze Narrate Sheet Y Storytelling	□
Q 8 2 0	TWO_DIGIT_CIP BUSINESS, MANAGEM BACHELORS COHORT 2010-2012	CIP_DESC CLCUNTING.	🛄 Selections
Status Flows			
Distinct Count All Graduates	Status		
3,111	% Percent		
Sector or Institutio	% Percent		
System View	Status 1 Year After Graduation	Status 3 Years After Graduation	Status 5 Years After Graduation
Count or Percent To Count % Percent	EMPLOYED IN STATE 66.2%	EMPLOYED IN STATE 61.7%	EMPLOYED IN STATE 56.9%
Cohort	EMPLOYED IN STATE AND RE-ENROLLED	UNKNOWN	UNKNOWN 23.1%
CIP Code	15.9%	19.1%	
2-Digit CIP Description	UNKNOWN	EARNED ANOTHER DEGI	REE EARNED ANOTHER DEGREE 15.8%
•••	14.4%	EMPLOYED IN STATE AN	



Pivot to Public-Facing Outcomes Data

m UNIVERSITY SYSTEM OF GEORGIA

Georgia Degrees Pay

All the information you need about degree attainment, student success, costs and affordability at the University System of Georgia's 26 public colleges and universities.

Compare:

Cost of Attendance

Your Future Earnings

Student Success





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SITES A-Z

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Tools to Compare Institutions

Your Future Earnings

Search online for every degree program at every USG institution to see the average earnings one, five and 10 years after graduation.

Compare





Student Success by Institution

See student success rates and enrollment for every USG institution.



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Earnings Tool for Transparent Economic Returns

Compare Your Future Earnings

Find out what you're likely to earn with a degree from academic programs across the University System of Georgia's 26 public colleges and universities.

You can also compare:



Student Success

Return to Georgia Degrees Pay





About How It Works The Data



Earnings After Graduation

View earnings ranges for different academic programs at a select institution 1, 5 or 10 years after graduation.

Use this tool



Compare Between Majors

Compare earnings ranges across several academic programs at selected institution and degree level.

Use this tool



Compare Between Schools

Compare earnings ranges across USG colleges and universities for selected degree level and academic program.

Use this tool



Range of Earnings by Academic Area

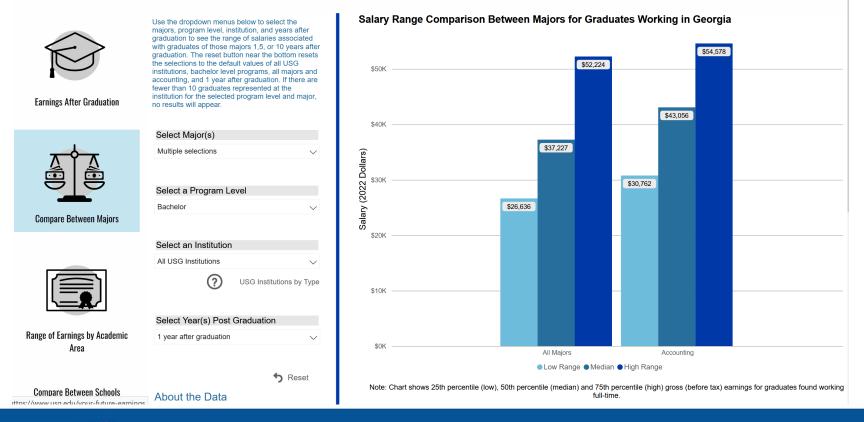
Earnings range associated with broad academic areas 1, 5 or 10 years after graduation at selected institution and degree level.

Use this tool

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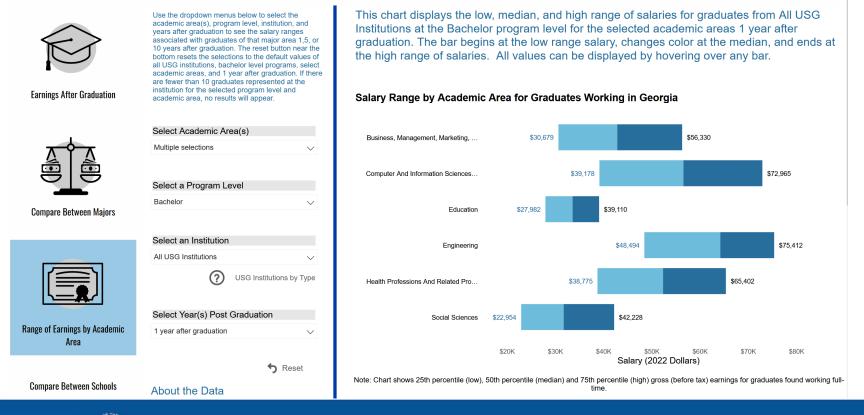


Your Future Earnings





Your Future Earnings





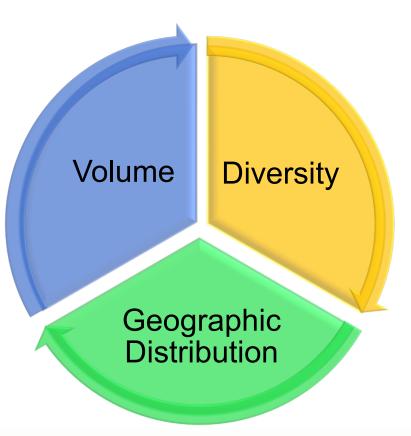
Application for Economic Developers



Economic Development is All About the Talent Pipeline

- System office as one point of contact for local and state government economic development offices and businesses
- Efficiency and standardization in system efforts
- Self-service data for campus economic development offices

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Questions and Contact



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