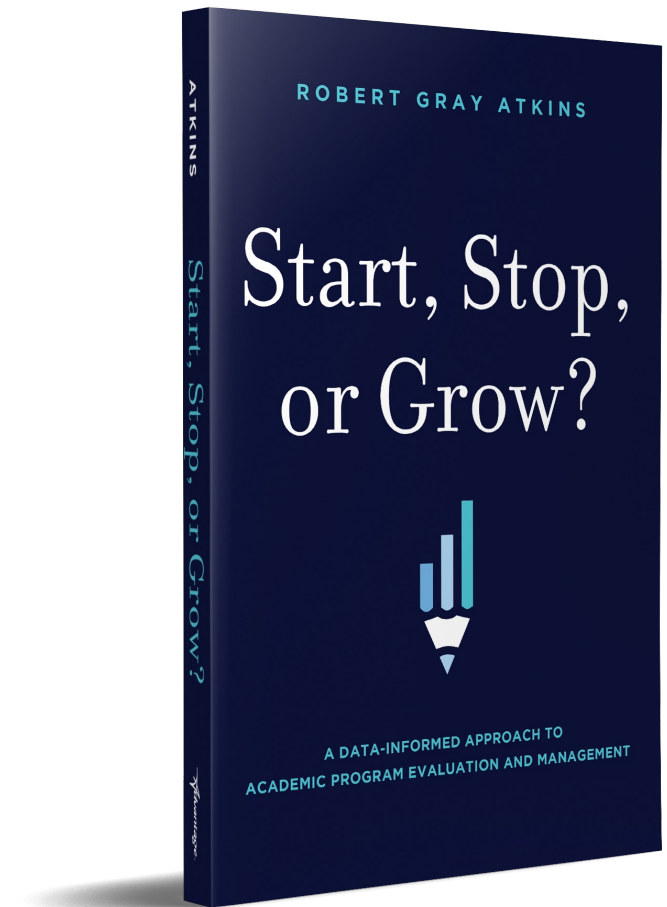




**GRAY**  
ASSOCIATES

## Demand for Higher-Education Programs

Results through May 2023



**Gray has developed a complete Program Evaluation System.**  
**A PES is an inclusive, data-informed evaluation process.**



# Agenda

## Student Demand

- Leading Indicators: Google
- Recent Trends: Enrollment
- Non-Degree Courses

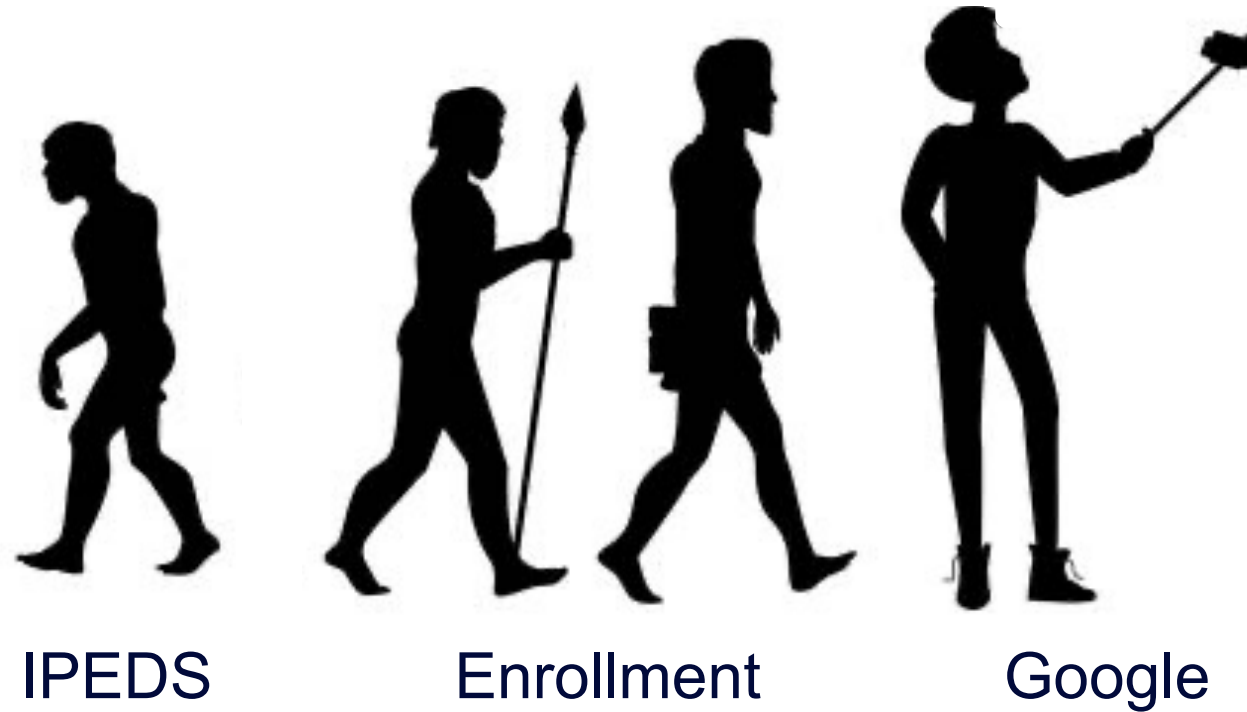
## Employment: Current Indicators

## Program of the Month

## Summary

# **IPEDS, Enrollment, and Google Search: Past, Present, and Future**

## **Insights on Student Demand**



# Agenda

## Student Demand

- Leading Indicators: Google
- Recent Trends: Enrollment
- Non-Degree Courses

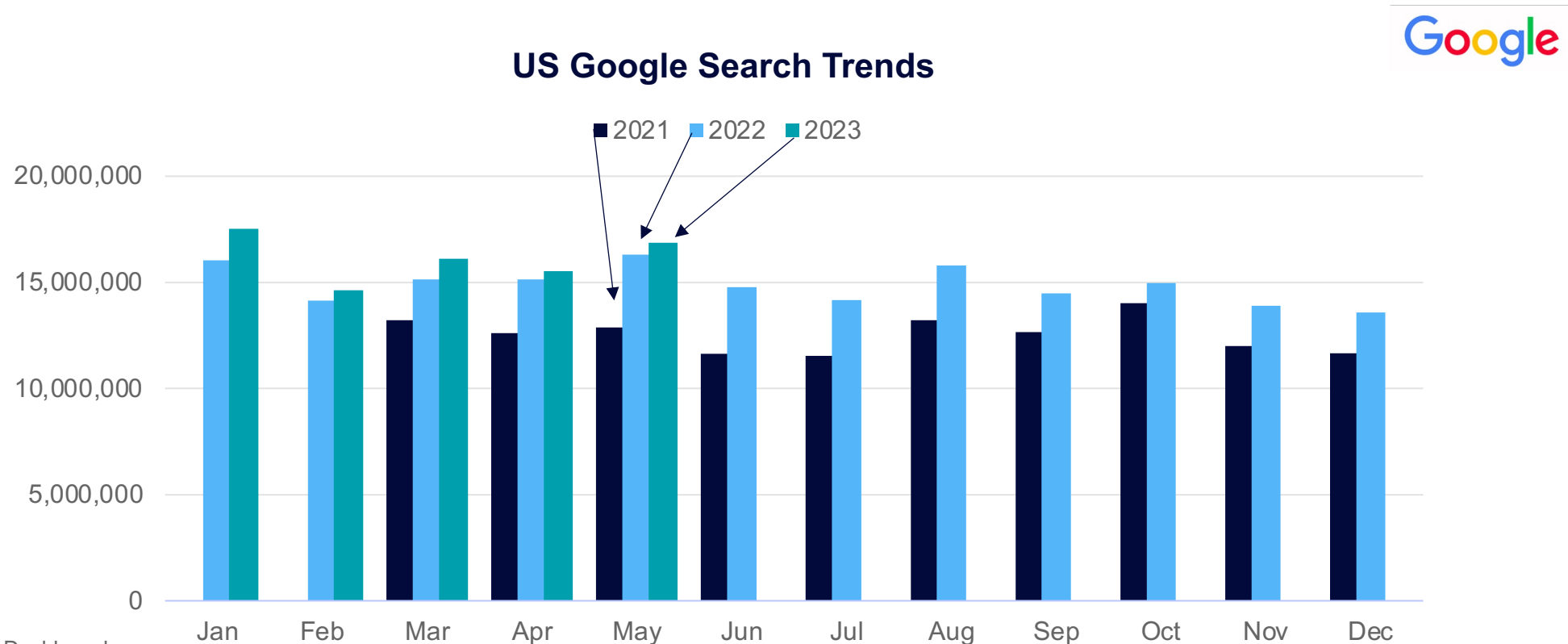
## Employment: Current Indicators

## Program of the Month

## Summary

## Google Search Trends: Programs

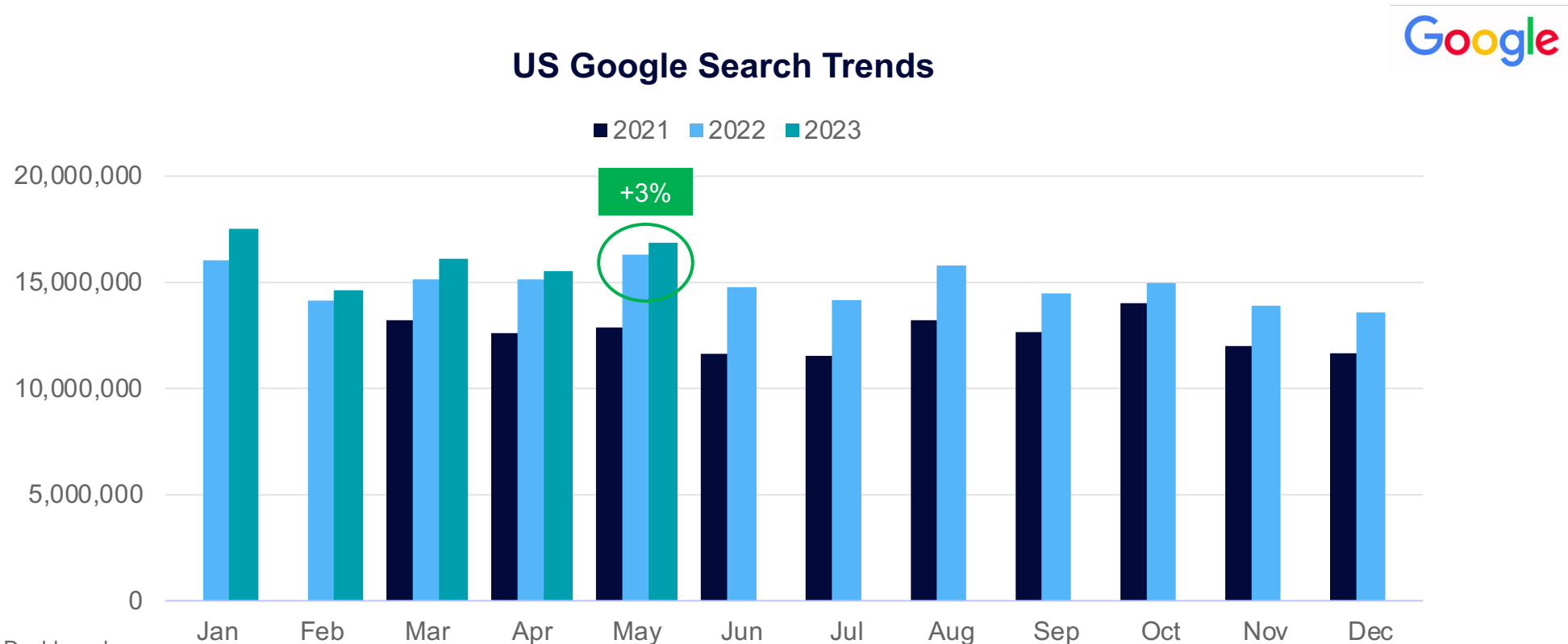
Gray tracks searches for over 900 programs (90% of all US completions).



Source: PES Keyword Search Dashboard

## Google Search Trends: Programs

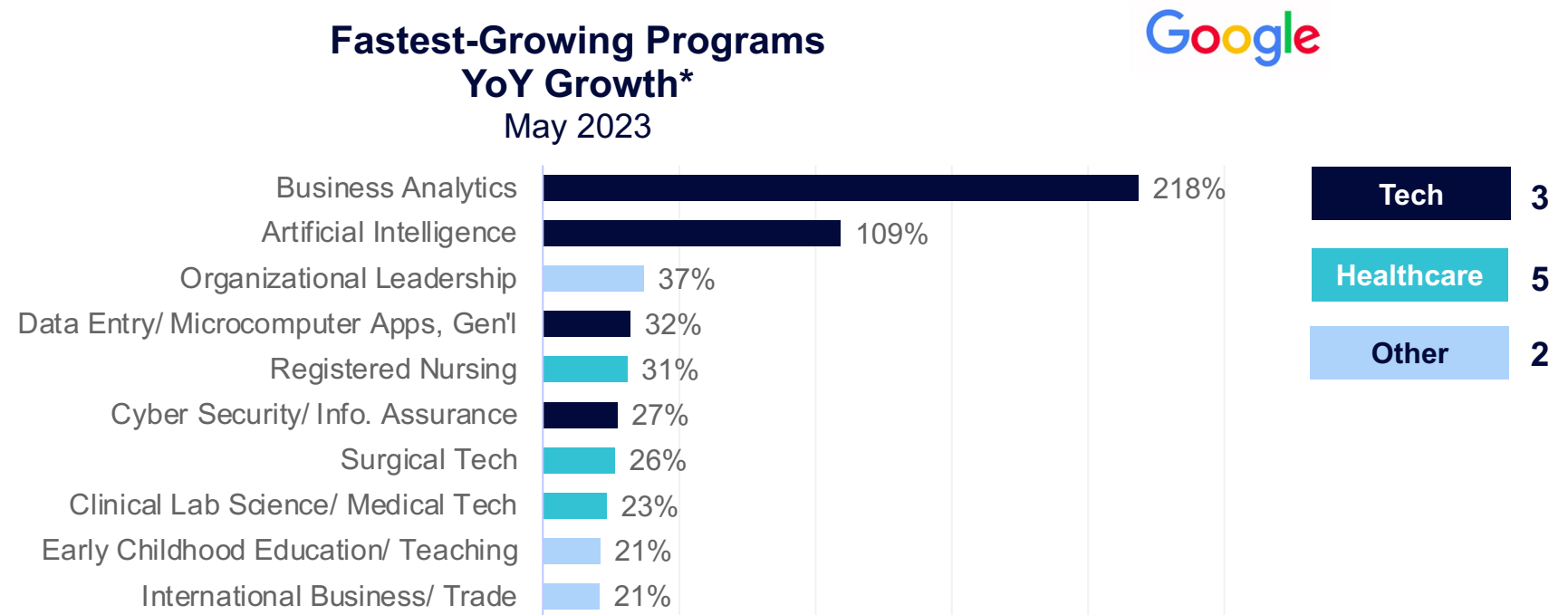
In May 2023, Google searches for academic programs rose 3% year-over-year.



Source: PES Keyword Search Dashboard

## Google: US Fastest-Growing Programs

In May, searches for Business Analytics programs increased 218% year-over-year.

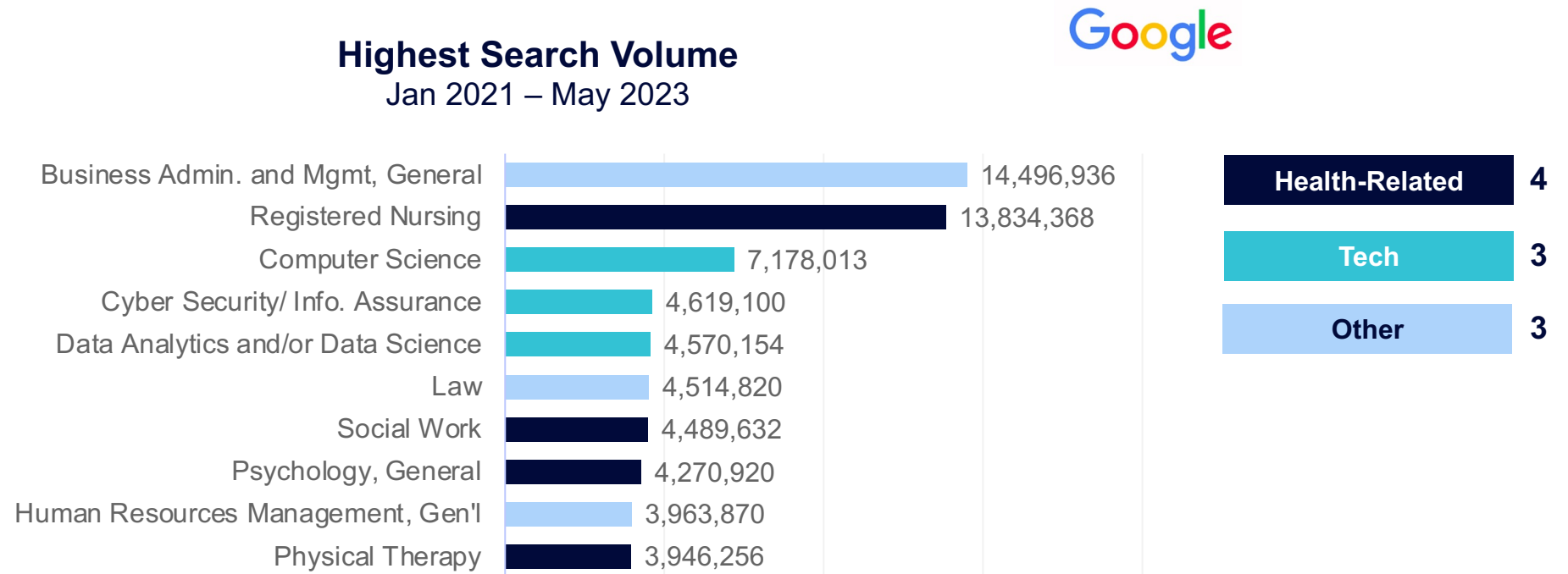


\*Minimum 10,000 searches May 2022



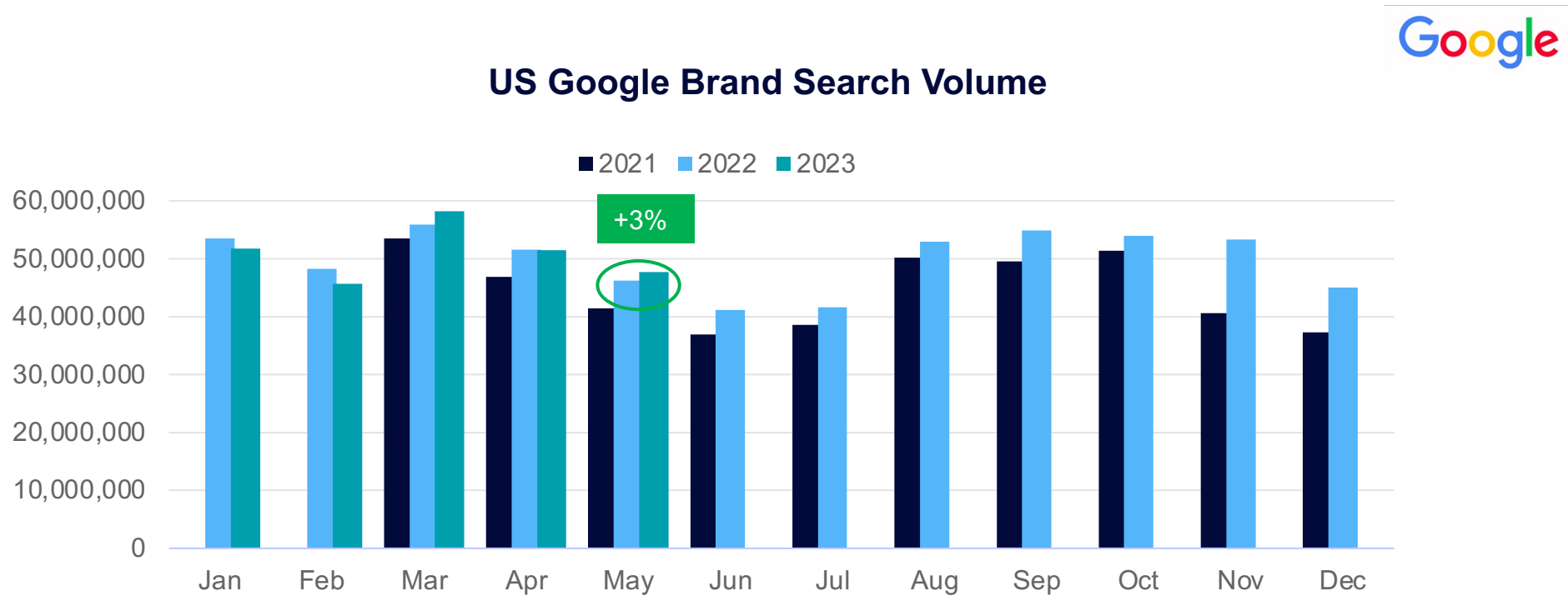
## Google: The Big 10

From January 2021 – May 2023, Business had the highest search volume.



## Google Search Trends: Brands

In May 2023, Google brand searches for academic programs rose 3% year-over-year.



# Agenda

## Student Demand

- Leading Indicators: Google
- Recent Trends: Enrollment
- Non-Degree Courses

## Employment: Current Indicators

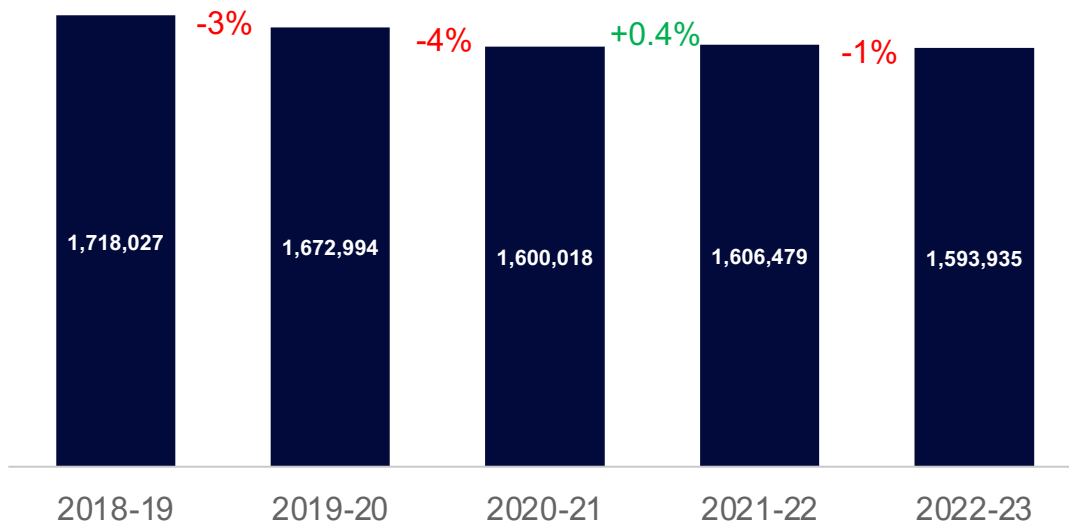
## Program of the Month

## Summary

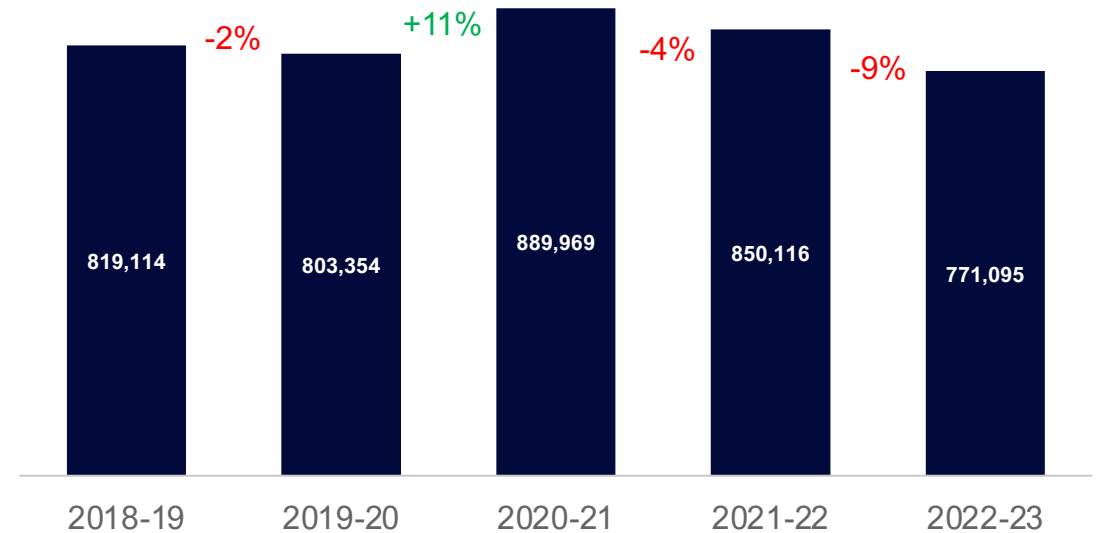
## In Fall/Spring 2022–23, new enrollment fell.

- Bachelor's new enrollment was down slightly year-over-year.
- Master's new enrollment fell 9%.

**US 2022-23 New Enrollment**  
Bachelor's Programs, 2018 - 2023



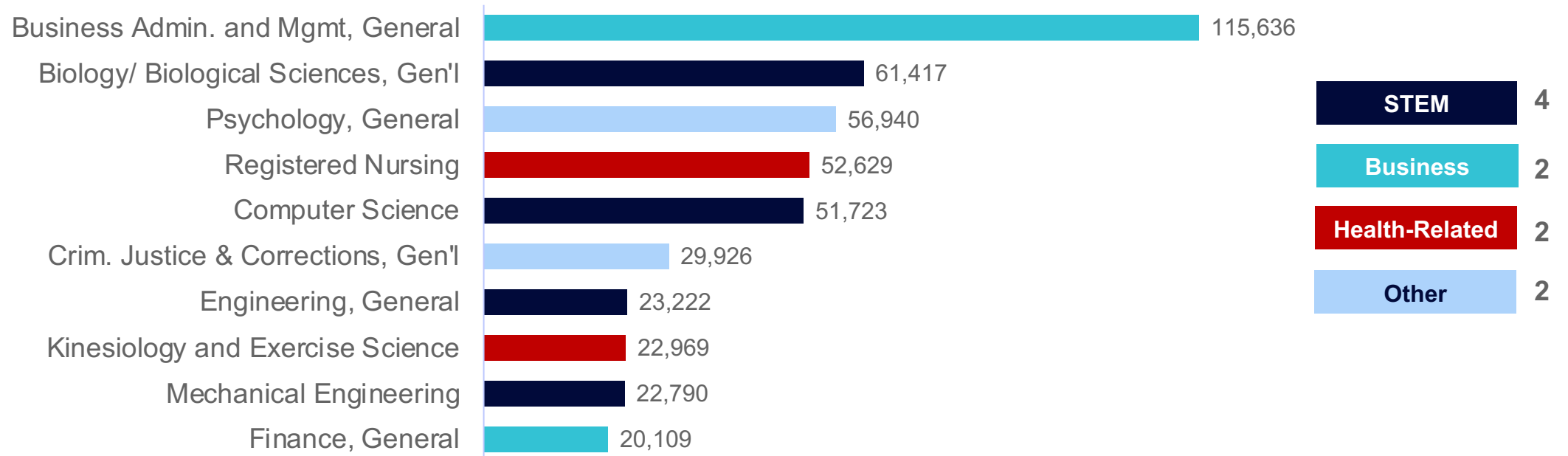
**US 2022-23 New Student Enrollment**  
Master's Programs, 2018 - 2023



Source: Gray Analysis of National Student Clearinghouse

## Bachelor's: In Fall/Spring, Business had the highest new enrollment.\*

**Highest New Enrollment**  
Bachelor's Programs Fall/Spring 2022-23

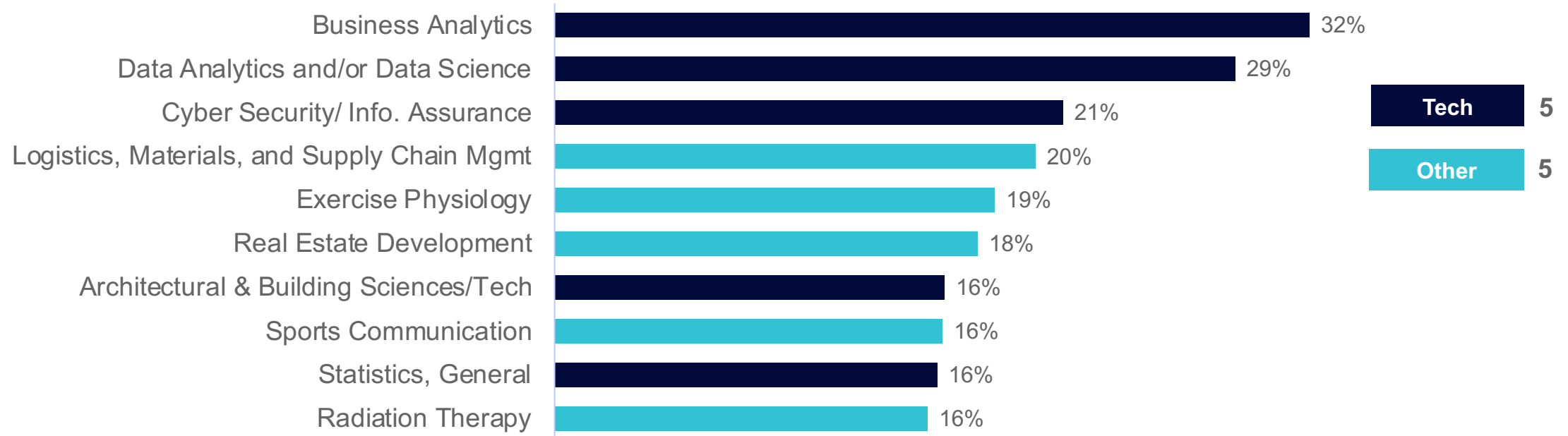


Source: Gray analysis of National Student Clearinghouse data

\*Excludes CIP codes ending in 99, "Other" and Liberal Arts and General Studies

## Bachelor's: In Fall/Spring 2022- 23, Business Analytics grew 32% YoY.

### Fastest-Growing New Enrollment\* Bachelor's Programs Fall/Spring 2022-23 Year-over-Year



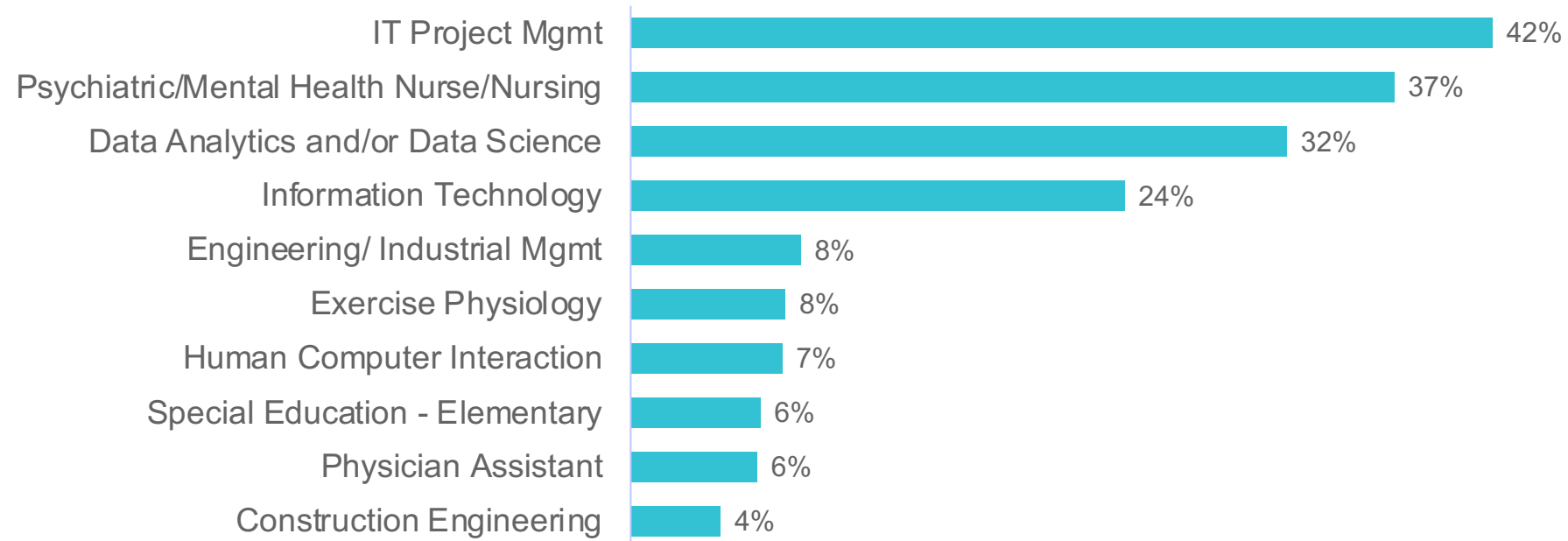
Source: Gray analysis of National Student Clearinghouse data  
Excludes CIP codes ending in 99, "Other"

\*Minimum 1,000 enrollees in 2021-22

## Master's: IT Project Management grew 42% YoY.

### Fastest-Growing New Enrollment\*

Master's Programs  
Fall/Spring 2022-23 Year-over-Year



Source: Gray analysis of National Student Clearinghouse data  
Excludes CIP codes ending in 99, "Other"

\*Minimum 1,000 enrollees in 2020-2021

# Agenda

## Student Demand

- Leading Indicators: Google
- Recent Trends: Enrollment
- Non-Degree Courses

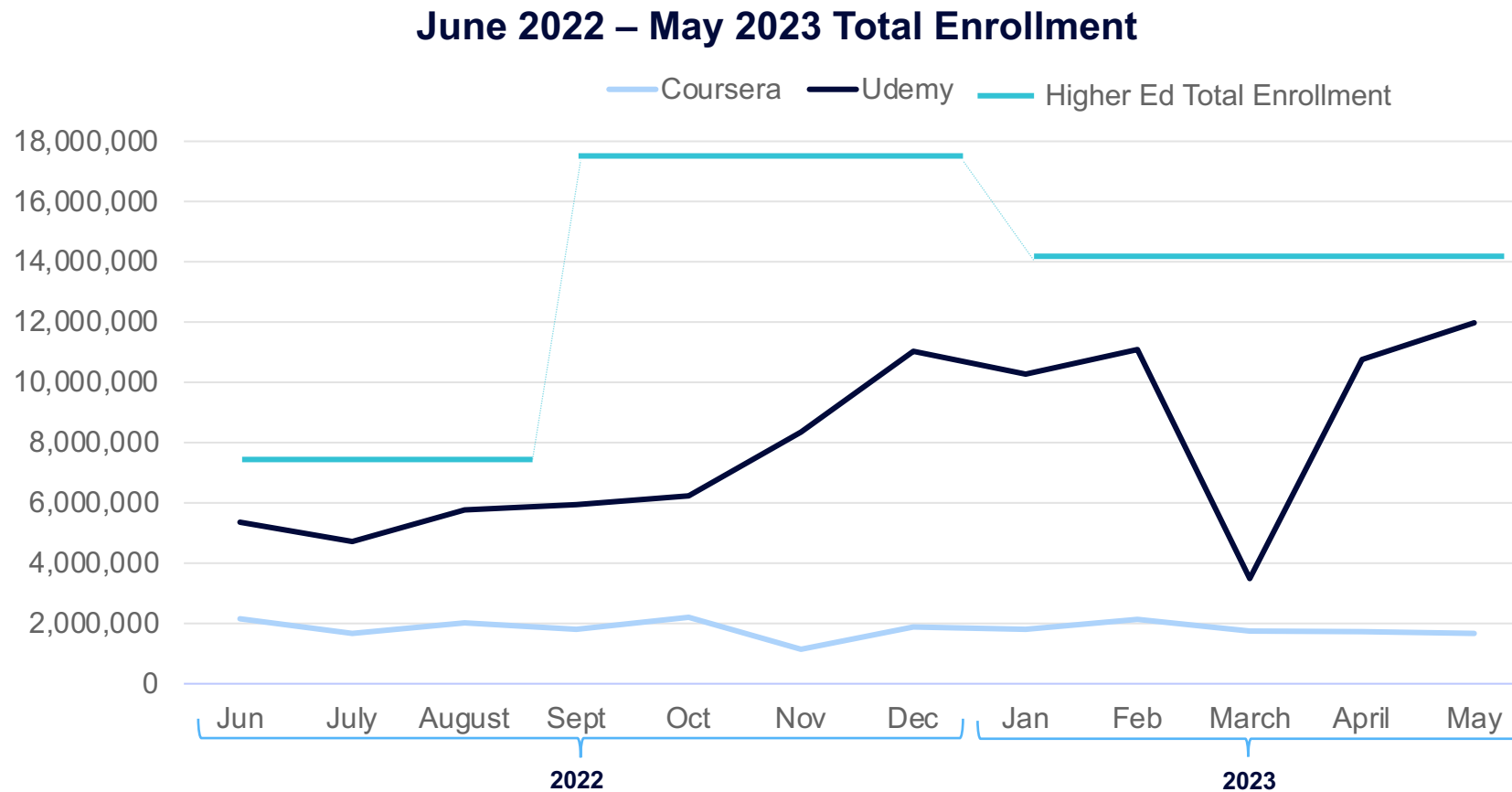
## Employment: Current Indicators

## Program of the Month

## Summary



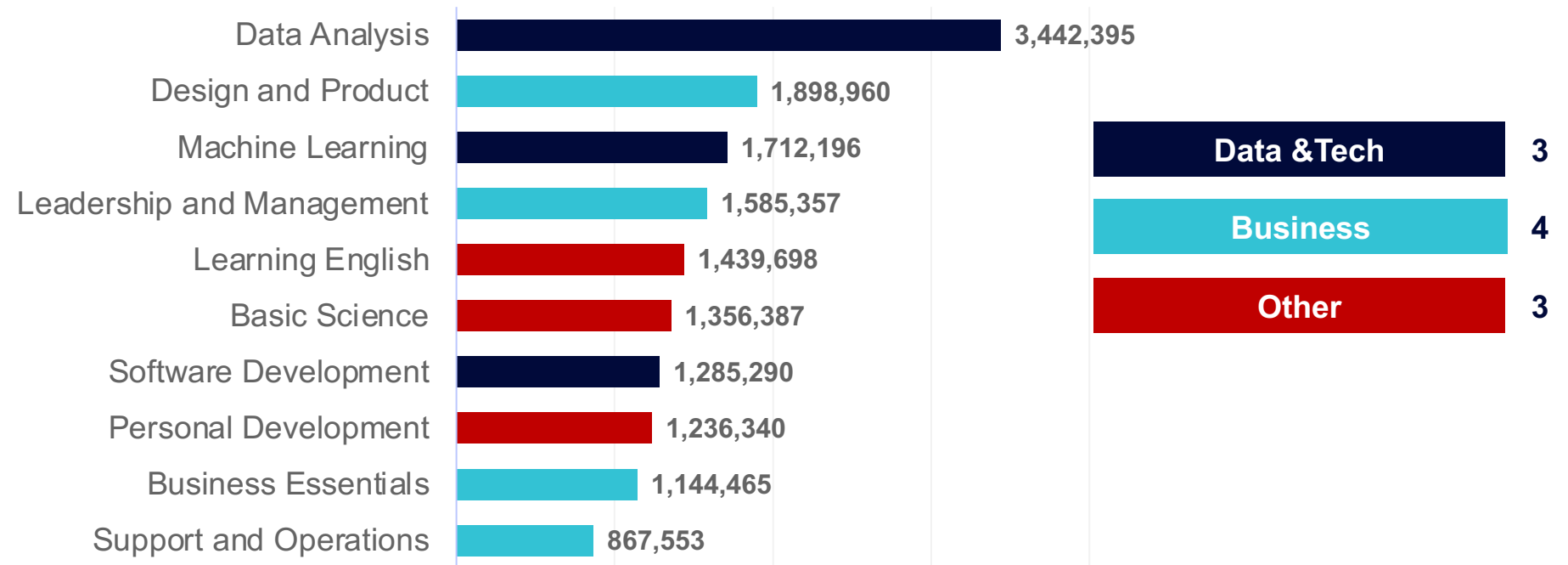
## Total Enrollment: Coursera, Udemy, Higher Education



## Coursera: Fastest-Growing Course Categories

In May, Data Analysis added the most students year-over-year.

**Highest Year-Over-Year Unit Change in Cumulative Enrollment**  
May 2023



# Agenda

## Student Demand

- Leading Indicators: Google
- Recent Trends: Enrollment
- Non-Degree Courses

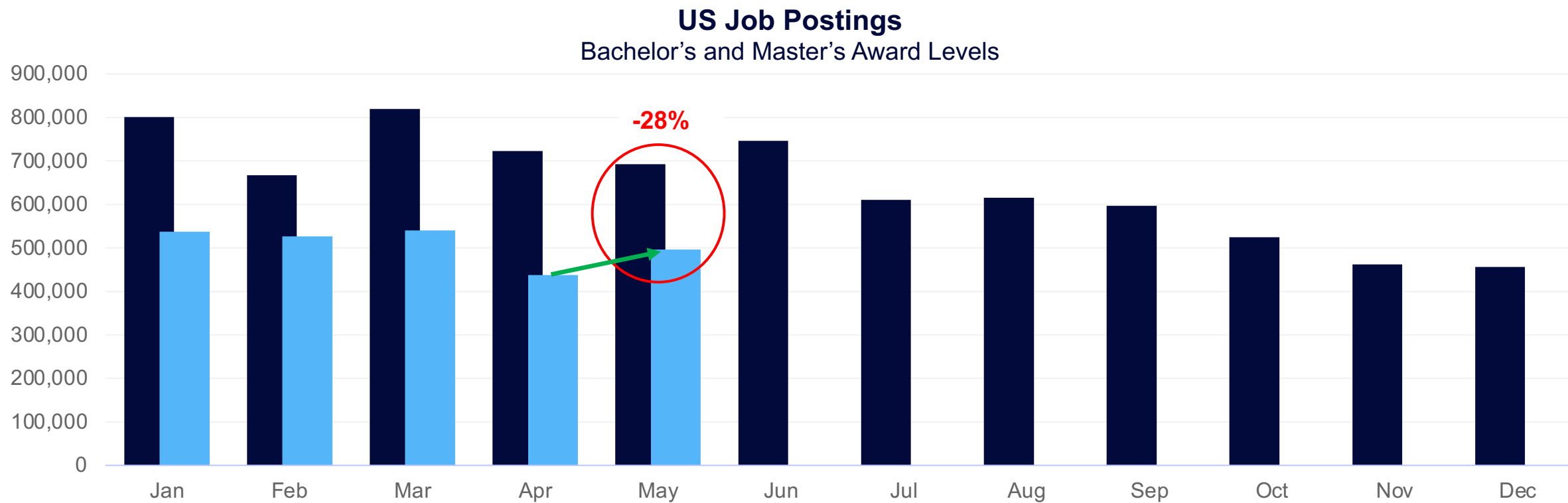
## Employment: Current Indicators

## Program of the Month

## Summary

**In May, US job postings for bachelor's and above grads fell 28% YoY.**

**They rose 13% month-over-month.**

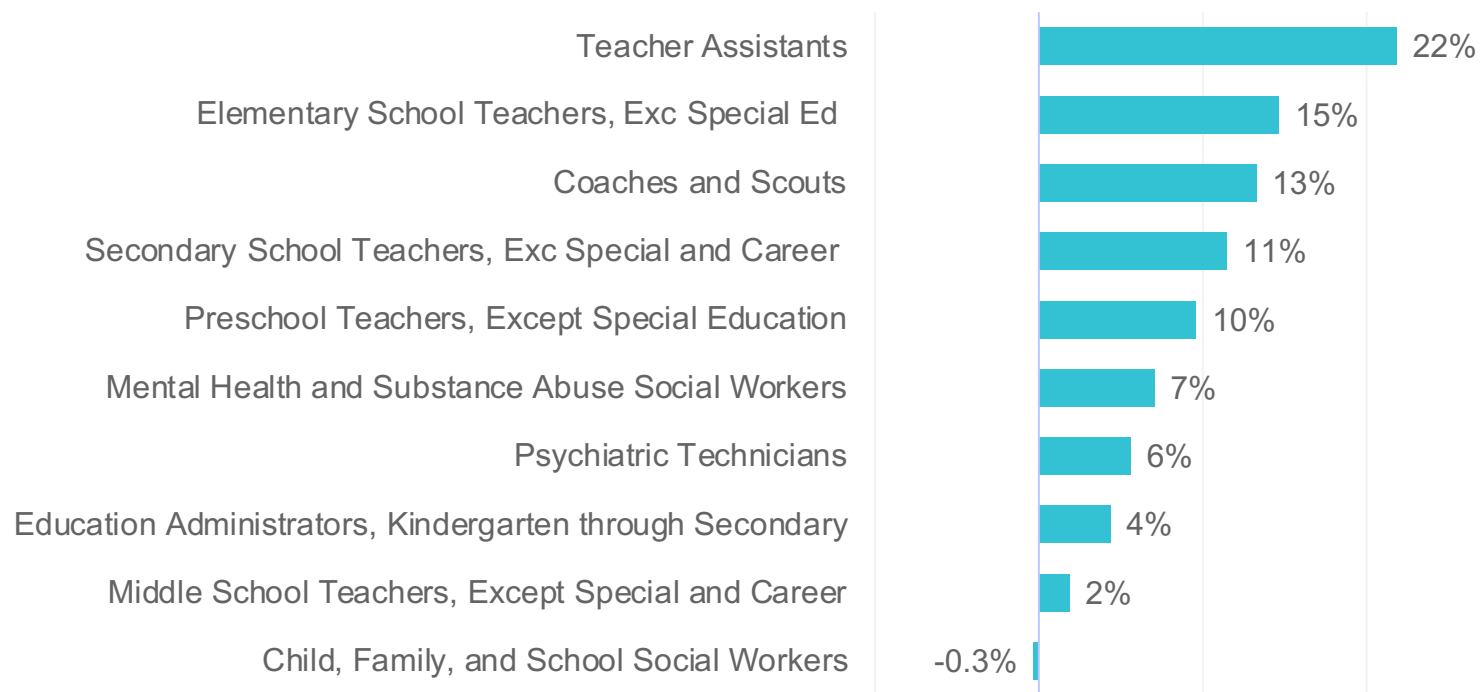


Source: Gray's Job Postings Dashboard

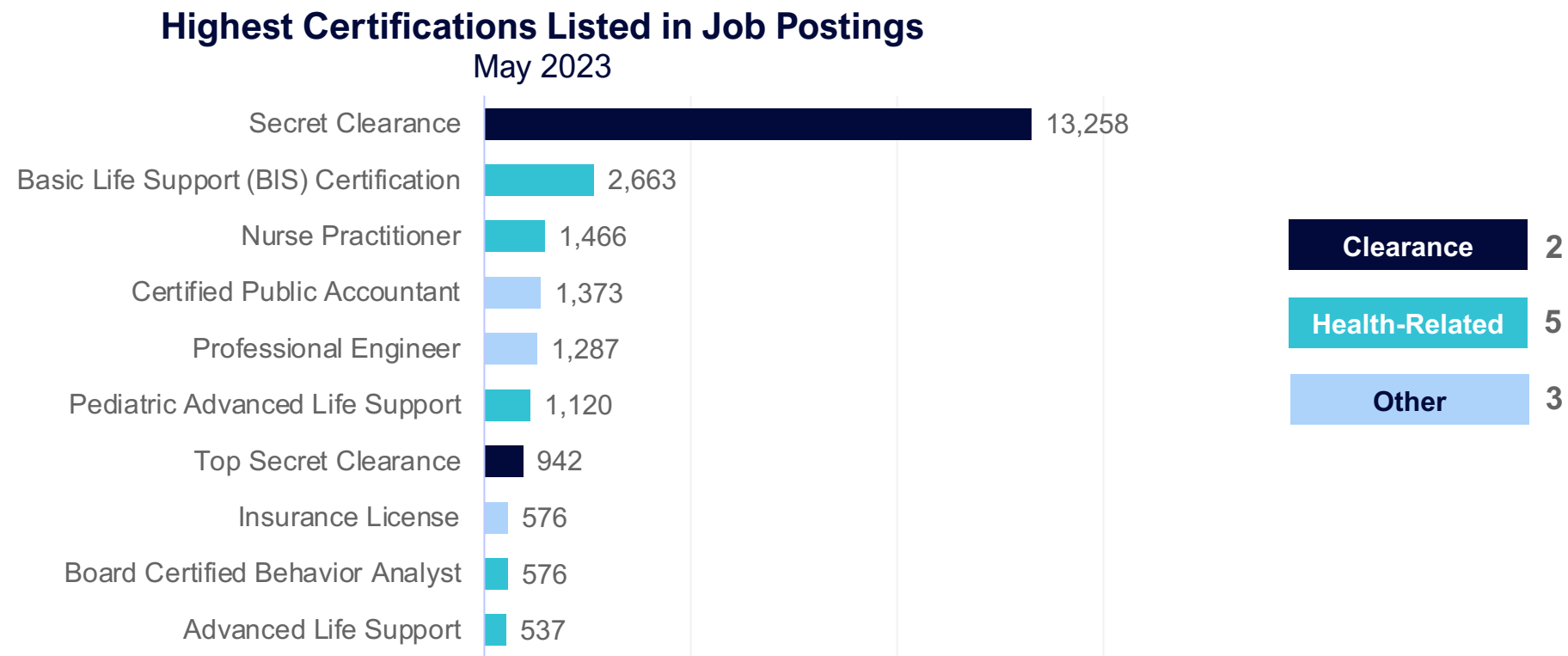
## What's growing in job postings?

### Highest Job Postings Growth by Occupation (SOC Code)

Bachelor's and Above, May 2023 YoY



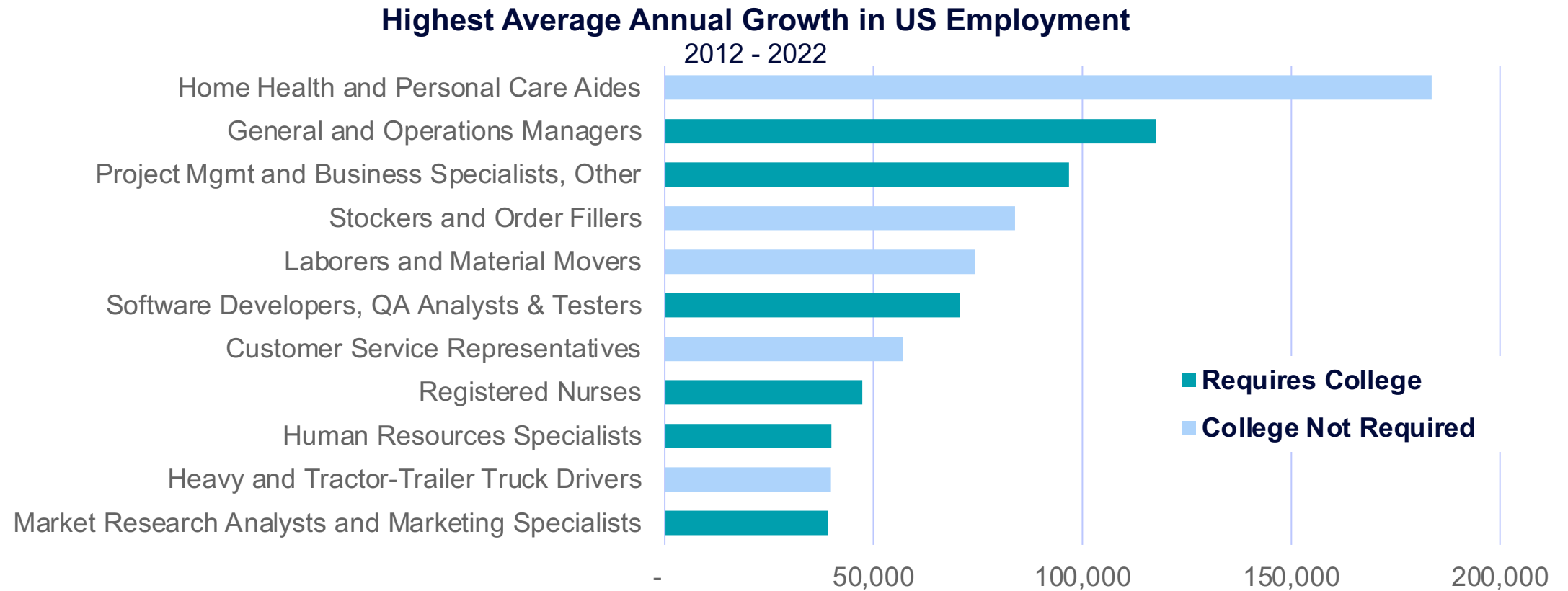
# Certifications in Secret Clearance and Healthcare had the highest demand in job postings.



Source: Gray's Job Postings Dashboard

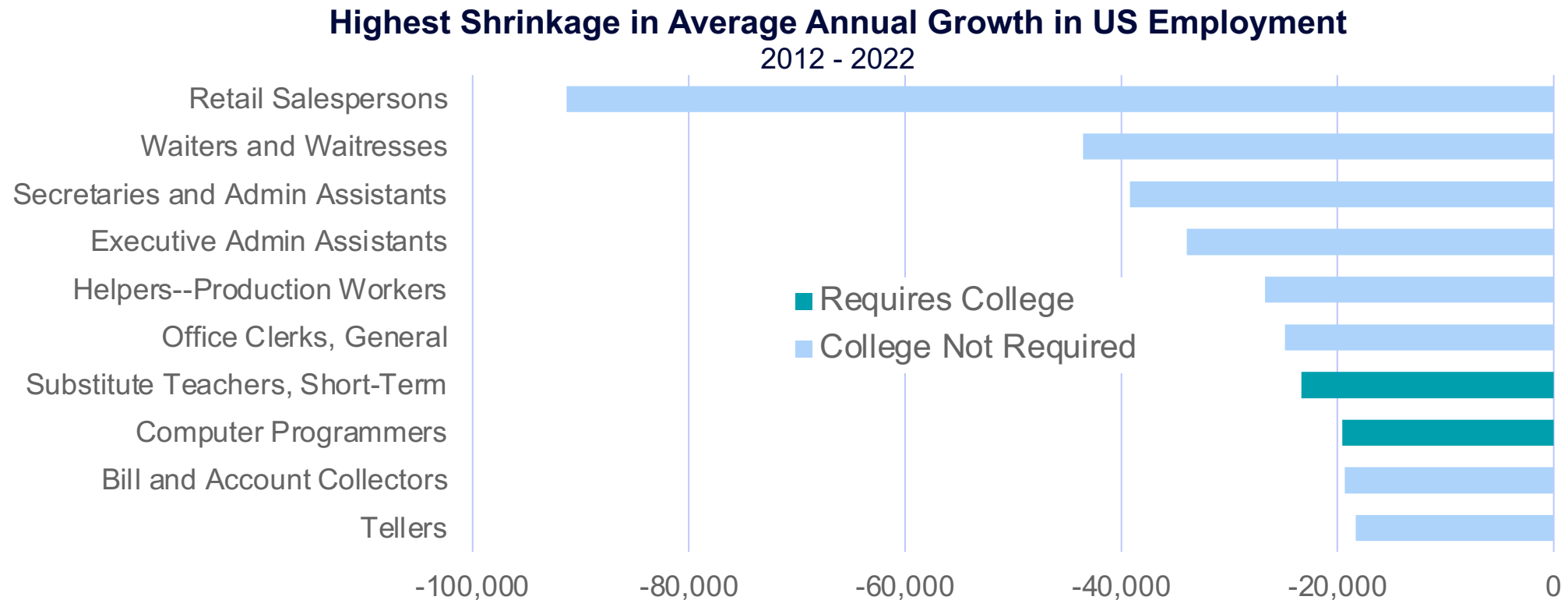
## Occupations with the Most and Steadiest Growth 2012-2022

Half the occupations with the most growth require college degrees.



## Occupations with the Most and Steadiest Shrinkage 2012-22

Nearly all occupations with the most shrinkage traditionally have not required college.

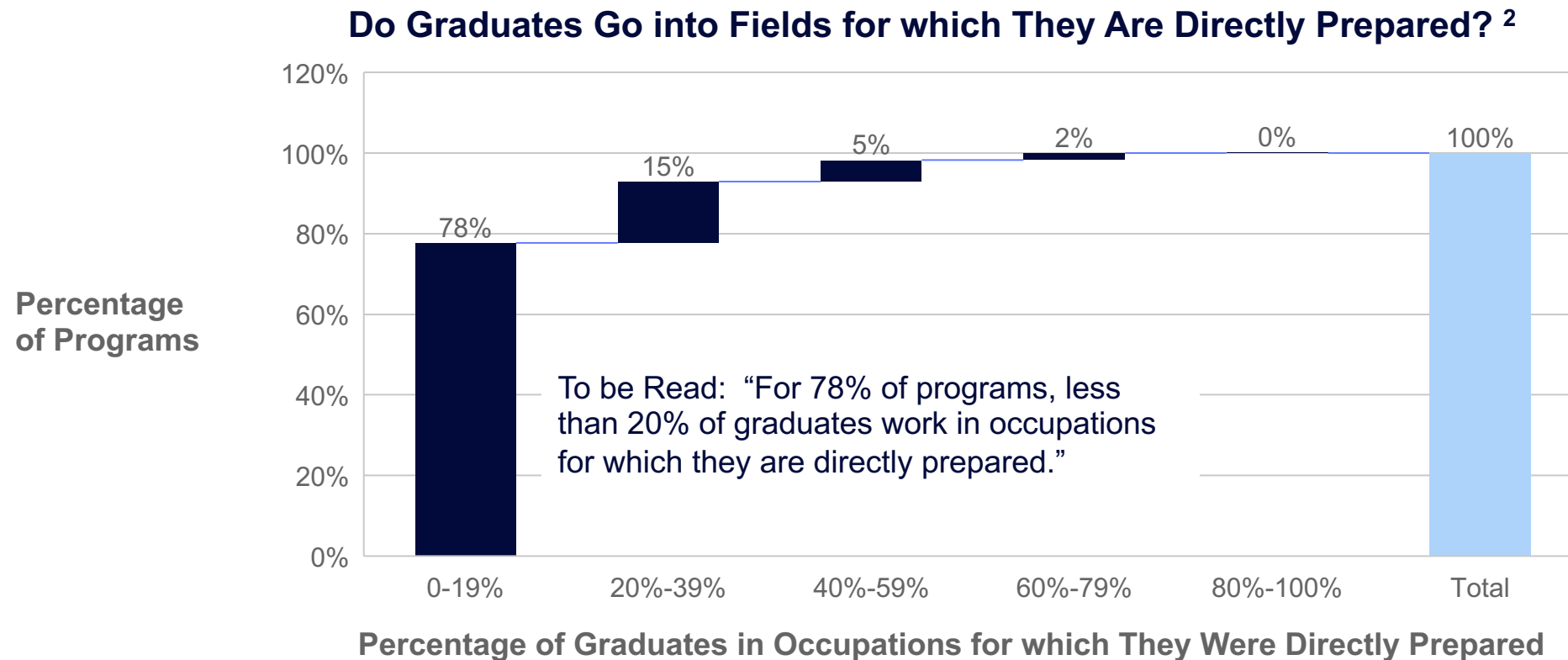


Note: Employment for office clerks was stable until the pandemic, then fell sharply and stayed down. Employment for waiters was stable until the pandemic, then fell sharply and has since partly recovered.



## NCES: “The CIP SOC Crosswalk is not based on actual empirical data.”<sup>1</sup>

78% of programs place less than 20% of graduates in jobs for which they are directly prepared.

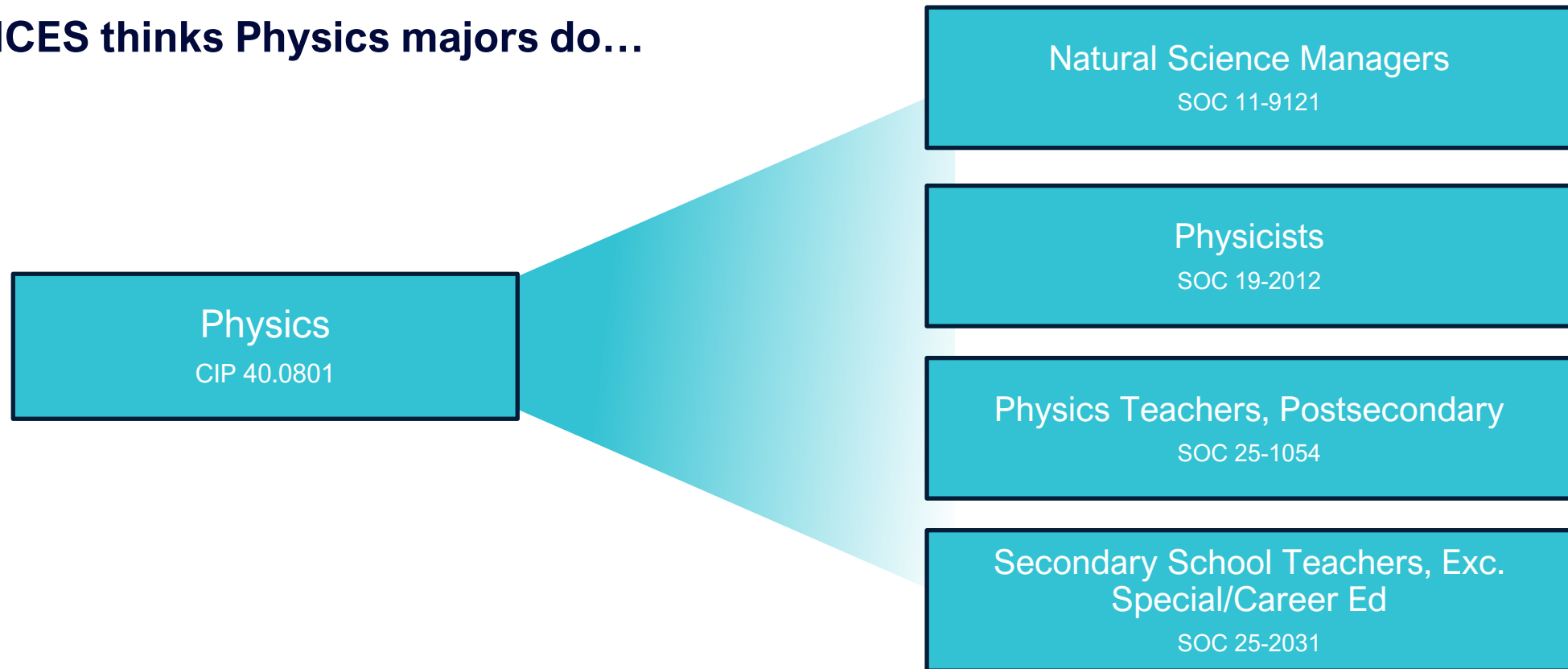


1. Source: IES NCES: “CIP SOC Crosswalk”, July 2021 <https://nces.ed.gov/ipeds/cipcode/post3.aspx?y=56>, Gray Analysis. Number of Programs: 634

2. US Census, American Community Survey, Gray Analysis. Bachelor’s-degree programs with over 100 completions.

## NCES CIP 2020 to SOC 2018 Crosswalk

### What NCES thinks Physics majors do...



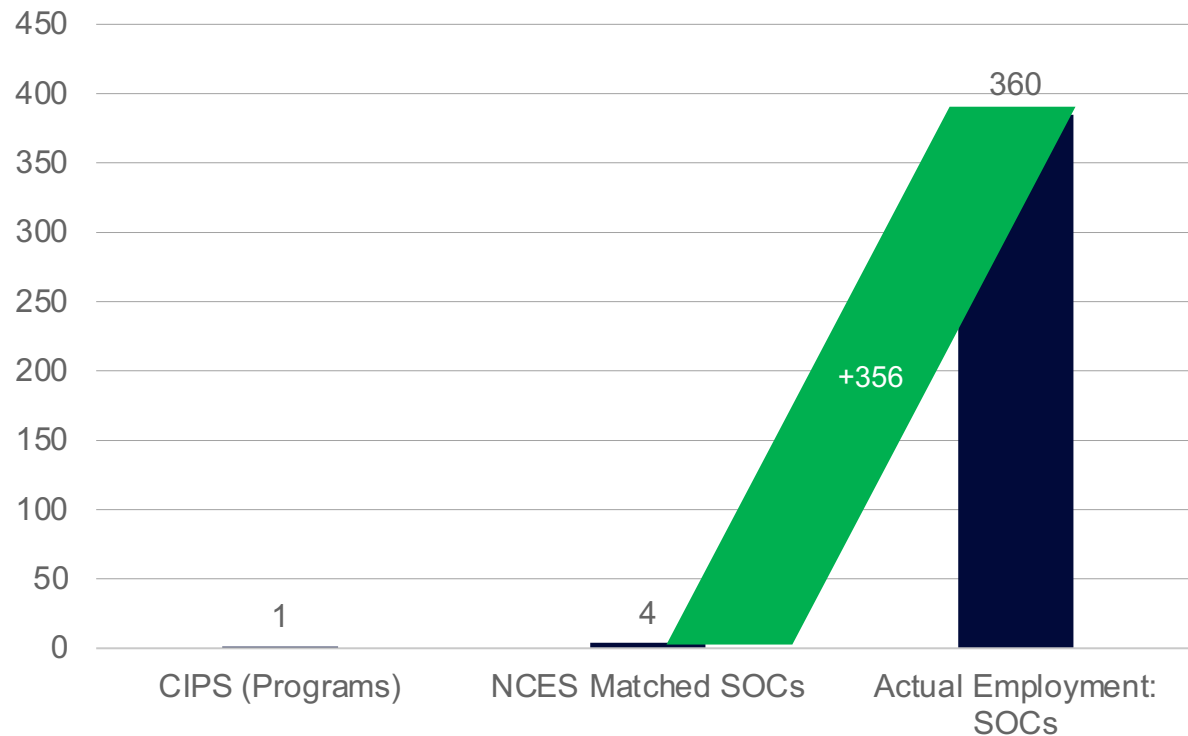
Source: IES NCES: "CIP SOC Crosswalk", July 2021  
<https://nces.ed.gov/ipeds/cipcode/post3.aspx?y=56>,



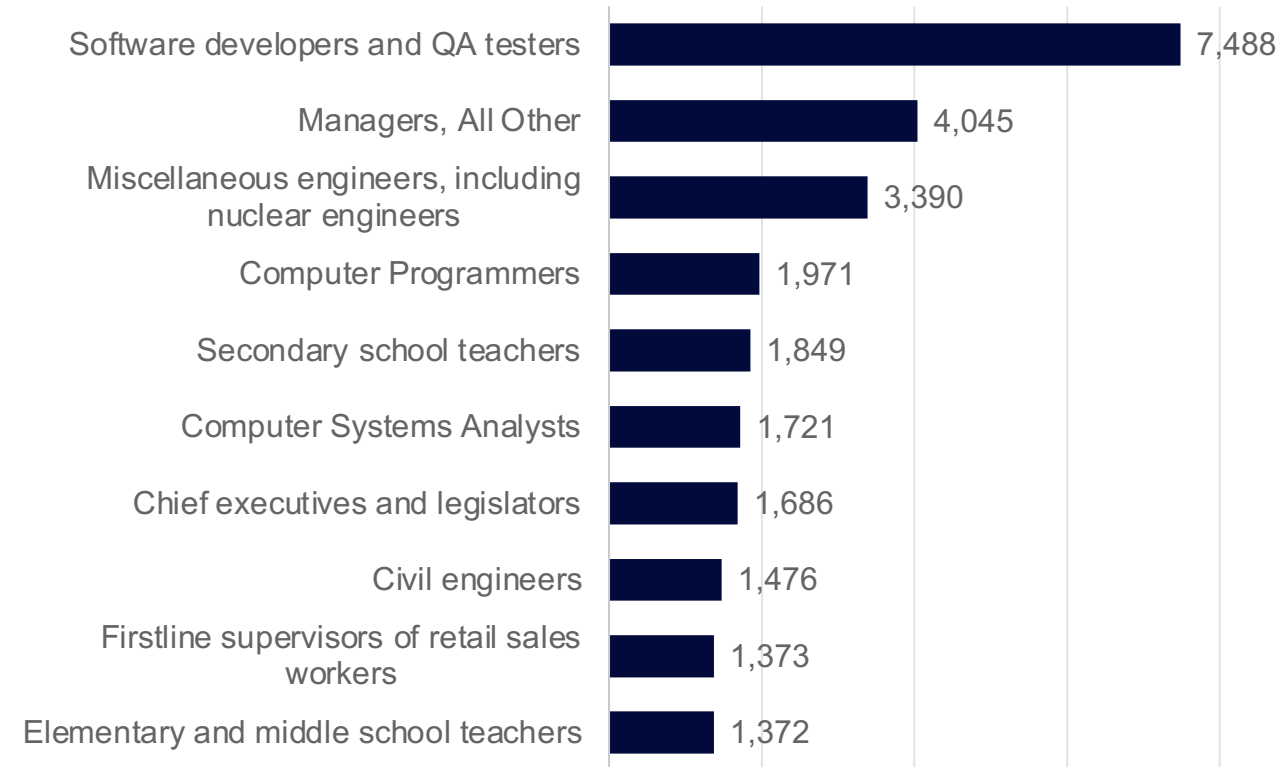
## Reality: Physics majors work in 360 SOC codes and earn an average of \$90,308.

### Count of Programs and Occupations

CIP 40.0801 Physics



### Top Occupations, Physics Majors



# Liberal Arts graduates don't always do what they are supposed to.

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
History Graduate	Voice Consultant					Marketing Director			Sales Account Manager				Financial Wellness Business Dev						Director of Corporate Sales			
	Mood-media					City Club of Rock Hill			Carowinds Cedar Fair Corporation				Sharonview Federal Credit Union						Greater Charlotte YMCA			
Philosophy Graduate	Agriculture/ Community Developer			Agriculture/Water Program Associate		Technical Trainer	Research and Writing Consultant			Production Manager				Production Manager and Video Producer					Manager and Director			
	Peace Corps			Mission Resource Conserv. District		CHP International	Aida Cules			Saltwater Inc. Alaska Fishery				e-Learning					Turn to Turn Productions			
English Graduate						Sales Associate				Sales Manager/Supervisor		Sales Partner	Special Ed Paraprofessional	English Teacher	English III and AP Language Teacher		English III and IV, Lead Content Teacher, English Dept Chair					
						William Sonoma				The Gap		Brighton Collectables	Partners in Special Ed	Fort Worth Teaching Fellows		OD Wyatt Middle School						
Psychology Graduate	Senior Sales Representative				Assistant Head Teller						Director of Scheduling	Chief of Staff		Community Outreach Coordinator					Director of Workforce Development			
	Sprint				TD Bank						NYS Senate		NYC Dept of Education					NYC DOT				
Economics Graduate						Seasonal Sales Associate	Fundraising Coordinator	Marketing Coordinator	Content Manager	Web Manager /optimization	Director of Business Solutions	Director of Operations				Vice President of Marketing and eCommerce				Director of eCommerce		
						William Sonoma	Muscular Dystrophy Association	Earth Fare								Sprouts Farmers						

# Agenda

## Student Demand

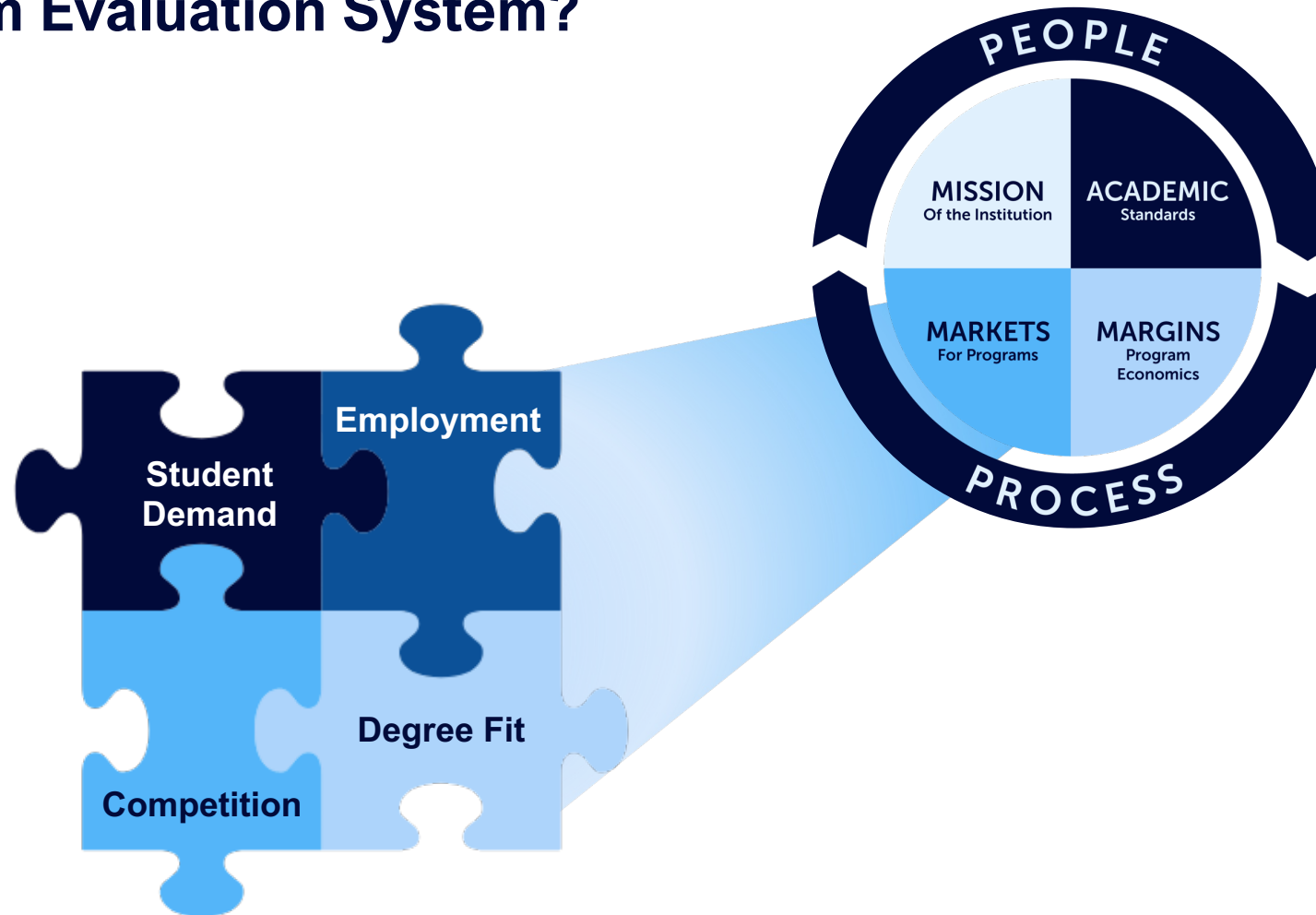
- Leading Indicators: Google
- Recent Trends: Enrollment
- Non-Degree Courses

## Employment: Current Indicators

## Program of the Month

## Summary

## What is a Program Evaluation System?



## US Bachelor's Program Ranking

Program	Overall Score	Student Demand	Competitive Intensity	Jobs	Degree Fit
04.0902 Architectural & Building Sciences/Tech	99	96	97	84	50
14.0501 Bioengineering and Biomedical Engineering	99	96	95	94	50
51.2010 Pharmaceutical Sciences	99	94	99	97	50
26.1503 Neurobiology and Anatomy	99	84	99	94	50
11.1003 Cyber Security/ Info. Assurance	98	99	5	78	50
26.0101 Biology/ Biological Sciences, Gen'l	98	98	30	90	50
30.7101 Data Analytics and/or Data Science	98	98	1	95	50
26.1501 Neuroscience	98	97	14	94	50
30.7102 Business Analytics	98	97	8	97	50
26.0102 Biomedical Sciences, General	98	96	39	94	50
14.1001 Electrical/Electronics Eng'n'g	98	96	20	99	50
52.1201 Management Info. Systems, General	98	96	20	98	50
14.0903 Computer Software Engineering	98	94	30	100	50
52.0601 Business/ Managerial Economics	98	93	30	99	50
14.0701 Chemical Engineering	98	92	95	98	50
15.1001 Construction Engineering Tech	98	91	99	87	50
29.0201 Intelligence, General	98	91	98	92	50
14.3501 Industrial Engineering	98	91	95	97	50
14.4701 Electrical and Computer Eng'g	98	91	50	99	50

Total Percentile	0	20+	40+	70+	90+	95+	98+	100
Total Score	-32	-6	-1	3	11	16	24	49

## Program Scorecard: Student Demand

**A Bachelor's in Neuroscience scores in the 97<sup>th</sup> percentile for Student Demand.**

- This is a large program.
  - Google search volume, the most current indicator of student demand, is in the 85<sup>th</sup> percentile.
  - International page views are high
  - New enrollment and completions volume are high.
  - This program is almost entirely on campus.

Student Demand				
Score: 21 Percentile: 97				
Catego...	Pctl	Criterion	Value	Score
Size	85	Google Search Volume (3 Months)*	57,750	2
	95	International Page Views (12 Months)	640	NS
	96	New Student Enrollment Volume (12 Mo.)	6,057	6
	97	On-ground Completions at In-Market Institutions	9,066	3
	77	Online Completions by In-Market Students	19	1
	96	Sum of On-ground and Online Completions	9,085	3



## Student Demand: Growth Metrics

Older growth metrics are strongest.

- Google searches are down slightly.
- New student enrollment grew 8% year-over-year.
- Completion volume grew 10%.

### Student Demand

Score: 21 Percentile: 97

Catego...	Pctl	Criterion	Value	Score
Size	85	Google Search Volume (3 Months)*	57,750	2
	95	International Page Views (12 Months)	640	NS
	96	New Student Enrollment Volume (12 Mo.)	6,057	6
	97	On-ground Completions at In-Market Institutions	9,066	3
	77	Online Completions by In-Market Students	19	1
	96	Sum of On-ground and Online Completions	9,085	3
Growth	25	Google Search YoY Change (Units)*	-670	0
	98	New Student Enrollment Vol. YoY Change (Units)	426	3
	98	Completion Volume YoY Change (Units)	802	3
	53	Google Search YoY Change (%)*	-1%	0
	69	New Student Enrollment Vol. YoY Change (%)	8%	0
	70	Completion Volume YoY Change (%)	10%	0



## Program Scorecard: Employment

**A Bachelor in Neuroscience ranks in the 94<sup>th</sup> percentile for Employment.**

### Direct Prep Jobs:

- Job postings and current employment are fair.
- 6% three-year historical job growth
  - 2% year-over-year growth
- Low job postings per graduate
- Top 1% of mean wages: \$146,127 (99<sup>th</sup> percentile)

### ACS Outcomes:

- 82<sup>nd</sup> percentile for BLS current employment
- 18% of graduates go to direct prep jobs.
- 78% go on to graduate school.

### Employment\*

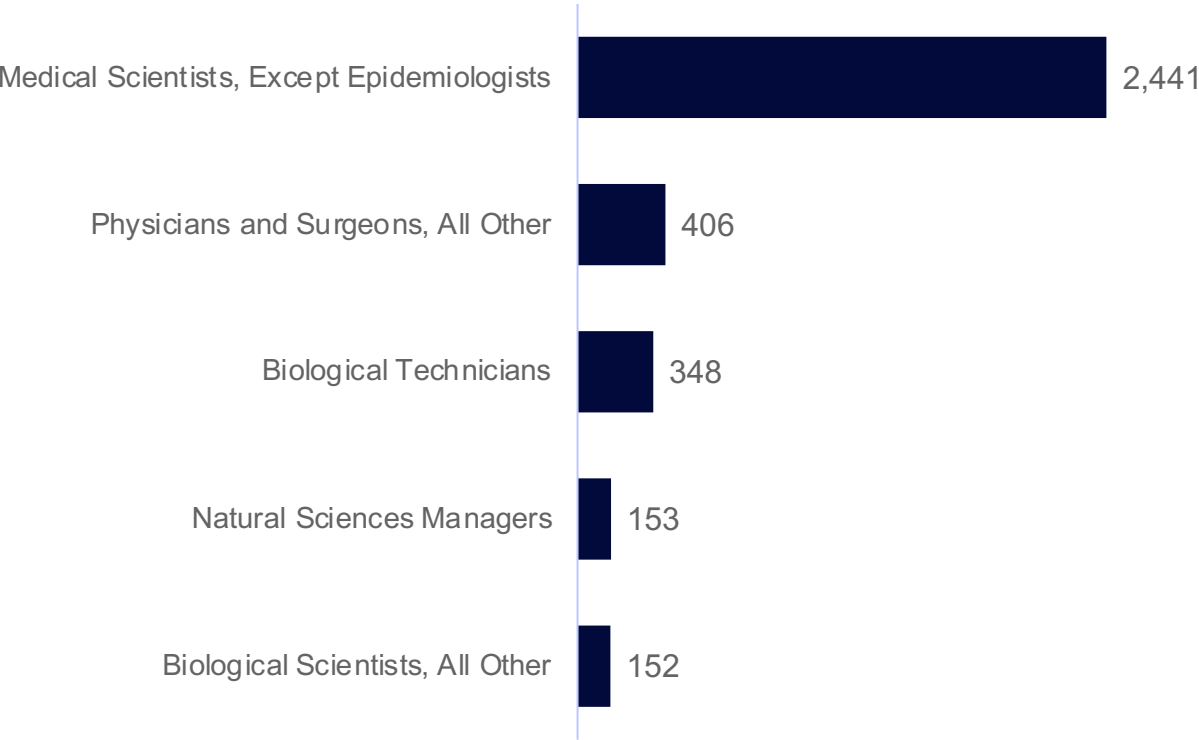
Score: 9 Percentile: 94

Category	Pctl	Criterion	Value	Score
Size: Direct Prep	71	Job Postings Total (12 Months)*	10,171	1
	61	BLS Current Employment*	12,400	0
	58	BLS Annual Job Openings*	973	NS
Size: ACS Bach. Outcomes	73	Job Postings Total (12 Months)*	10,371	NS
	82	BLS Current Employment*	28,758	NS
Growth (Direct Prep)	89	BLS 1-Year Historical Growth*	2.0%	NS
	93	BLS 3-Year Historic Growth (CAGR)*	6.0%	1
	48	BLS 10-Year Future Growth (CAGR)*	0.5%	-1
Saturation (Direct Prep)	33	Job Postings per Graduate*	1.0	-1
	24	BLS Job Openings per Graduate*	0.1	NS
Wages (Direct Prep)	98	BLS 10th-Percentile Wages*	\$79,503	NS
	99	BLS Mean Wages*	\$146,127	NS
National American Community Survey Bachelor's Degree Outcomes	70	Wages (Age < 30)	\$48,078	3
	96	Wages (Age 30-60)	\$146,890	6
	98	% with Any Graduate Degree	78%	NS
	17	% with Masters	17%	NS
	99	% with Doct/Prof Degree	61%	NS
	29	% Unemp. (Age <30)**	2%	0
	22	% Unemp. (Age 30-60)**	1%	0
	75	% in Direct Prep Jobs	18%	NS



In May, Medical Scientists and Environmental Scientists were in high demand.

Highest Job Postings Volume by Occupation  
Bachelor in Neuroscience, May 2023



Highest Job Postings Volume by Job Title  
Bachelor in Neuroscience, May 2023



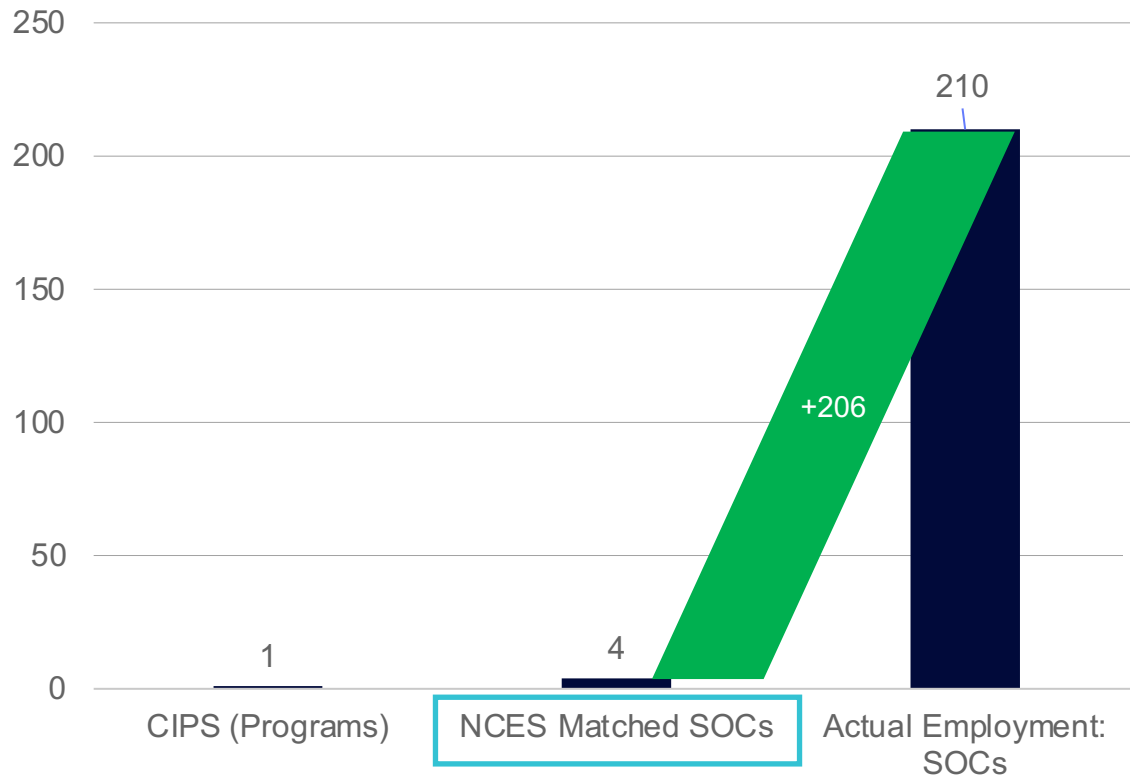
Source: PES Job Postings Dashboard



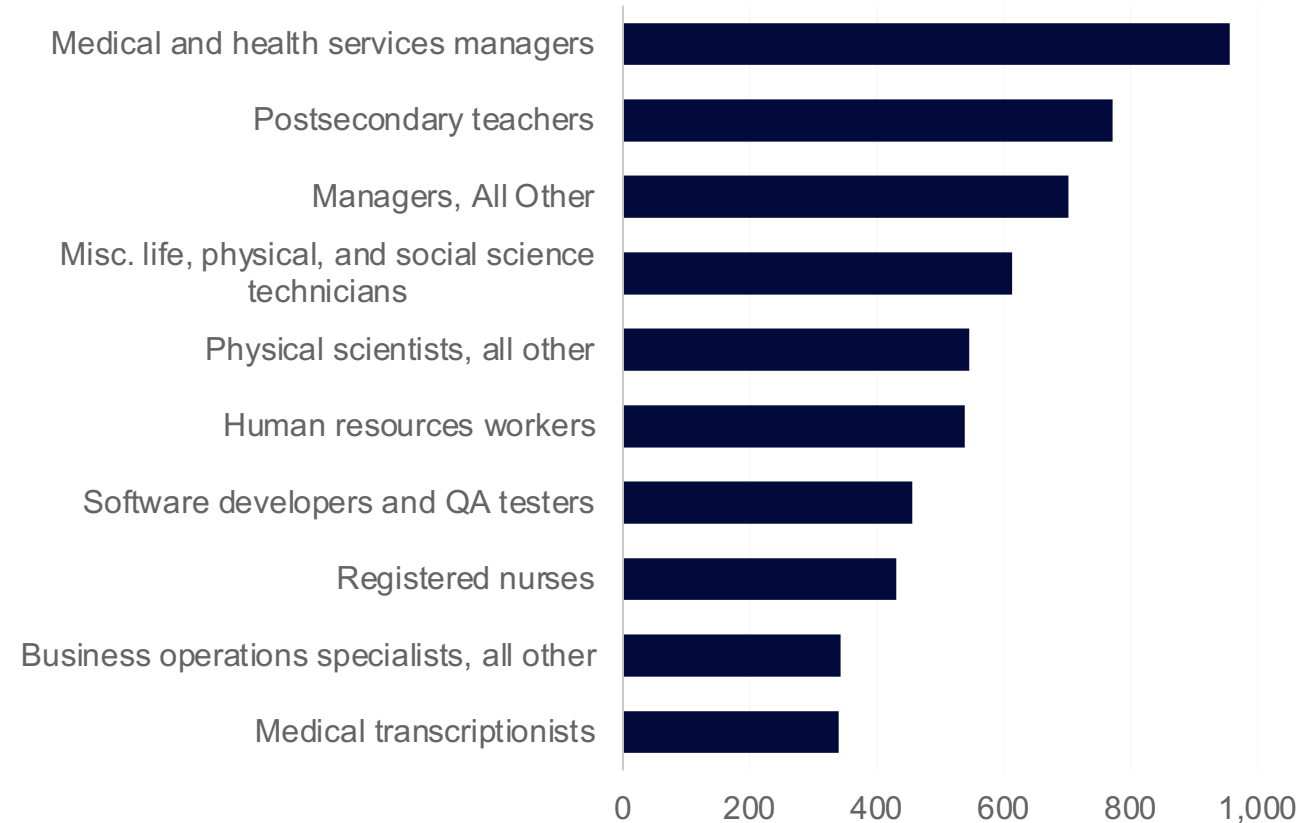
## ACS Outcomes: Neuroscience majors go into 210 SOCS and earn \$89,138 mid-career.

### Count of Programs and Occupations

CIP 26.1501, Neuroscience



### Top Occupations Neuroscience Majors, Ages 30-60



## Program Scorecard: Competitive Intensity

Neuroscience is in the 14<sup>th</sup> percentile for Competitive Intensity.

- There are 235 campuses graduating Neuroscience students.
- 14 new programs had graduates in 2021.
- Median program size is moderate and flat year-over-year.
- Marketing costs are favorable.
- No online competition

### Competitive Intensity Score: -6 Percentile: 14

Category	Pctl	Criterion	Value	Score
Volume of In-Market Competition	95	Campuses with Graduates**	235	-6
	99	Campuses with Grads YoY Change (Units)**	14	-3
	0	Institutions with Online In-Market Students**	0	NS
In-Market Program Sizes	90	Average Program Completions	39	2
	81	Median Program Completions	17	0
	67	YoY Median Prog. Compl. Change (Units)	0	0
	67	YoY Median Prog. Compl. Change (%)	0	0
In-Market Saturation	45	Google Search * Cost per Click**	\$3	0
	19	Google Competition Index**	0.05	1
National Online Competition	74	National Online Institutions (Units)**	1	NS
	0	Nat'l Online % of Institutions	0	NS
	0	Nat'l Online % of Completions	0	NS

## Program Scorecard: Degree Fit

**A bachelor's degree is an appropriate award level for Neuroscience.**

- 89% of completions are at the bachelor's level.
- 28% of the national workforce have a bachelor's degree.
- 36% of the workforce have a doctoral degree.

**National Completions by Level**  
Score: 0

Award Level	Completions (National)	Completions (Market)	Enrollment (Market)
Certificate	1%	1%	0%
Associates	0%	0%	0%
Bachelors	89%	89%	78%
Postbaccalaureate Certificate	0%	0%	0%
Masters	4%	4%	7%
Post-masters Certificate	0%	0%	1%
Doctoral	6%	6%	13%
Unknown	0%	0%	0%



### Degree Fit:

Score: 0 Percentile: 50

### National Workforce Ed. Attainment

Score: 0

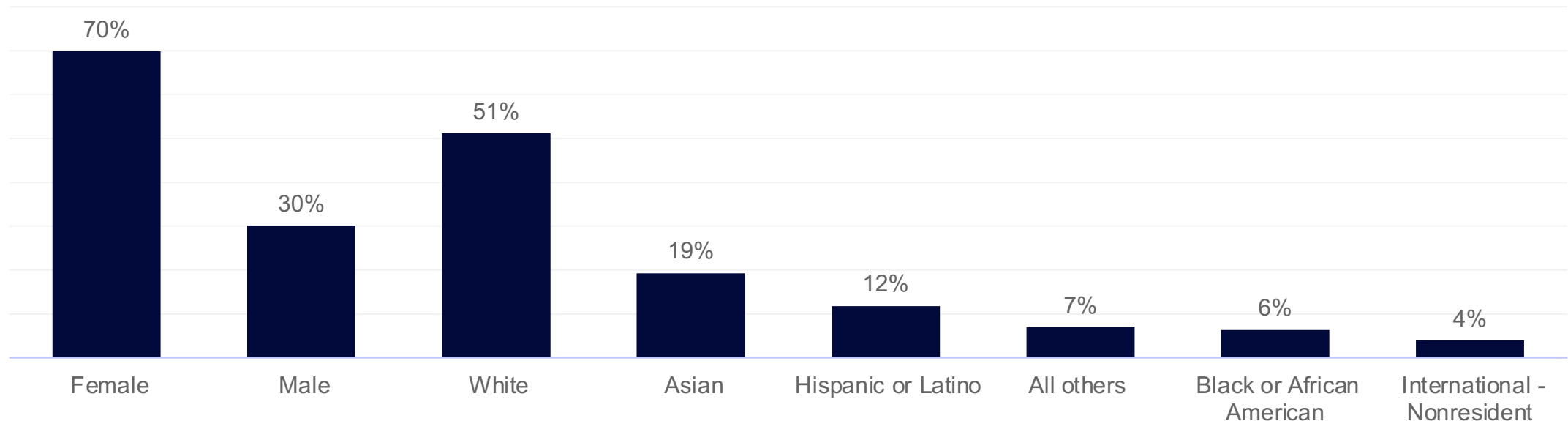
Award Level	BLS Educational Attainment
No College	5%
Some College	4%
Associates	4%
Bachelors	28%
Masters	23%
Doctoral	36%

## US demographics: Neuroscience

**In 2021, women had 70% of completions – more than their share of overall enrollment.**

- 51% of 2021 completions were by white students.
- 19% were by Asian students.

**US 2021 Completions by Demographic Group**



Source: Gray's PES Markets

CIP: 26.1501 Neuroscience

Market: National

Total Score: 24

Percentile: 98

Student Demand

Score: 21 Percentile: 97

Catego...	Pctl	Criterion	Value	Score
Size	85	Google Search Volume (3 Months)*	57,750	2
	95	International Page Views (12 Months)	640	NS
	96	New Student Enrollment Volume (12 Mo.)	6,057	6
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	81	Median Program Completions	17	0
	67	YoY Median Prog. Compl. Change (Units)	0	0
	67	YoY Median Prog. Compl. Change (%)	0	0
In-Market Saturation	45	Google Search * Cost per Click**	\$3	0
	19	Google Competition Index**	0.05	1
National Online Competition	74	National Online Institutions (Units)**	1	NS
	0	Nat'l Online % of Institutions	0	NS
	0	Nat'l Online % of Completions	0	NS

Employment\*

Score: 9 Percentile: 94

Category	Pctl	Criterion	Value	Score
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	75	% in Direct Prep Jobs	18%	NS

**CIP Description:**  
A program that focuses on the interdisciplinary scientific study of the molecular, structural, physiologic, cognitive, and behavioral aspects of the brain and nervous system. Includes instruction in molecular and cellular neuroscience, brain science, anatomy and physiology of the central nervous system, molecular and biochemical bases of information processing, behavioral neuroscience, biology of neuropsychiatric disorders, and applications to the clinical sciences and biomedical engineering.

Degree Fit:

Score: 0 Percentile: 50

Category	Pctl	Criterion	Value	Score
NHEBI Nat'l 2 Year		Cost Index**	NA	NS
		Student: Faculty Index	NA	NS

National Completions by Level

Score: 0

Award Level	Completions (National)	Completions (Market)	Enrollment (Market)
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Masters	23%
Doctoral	36%

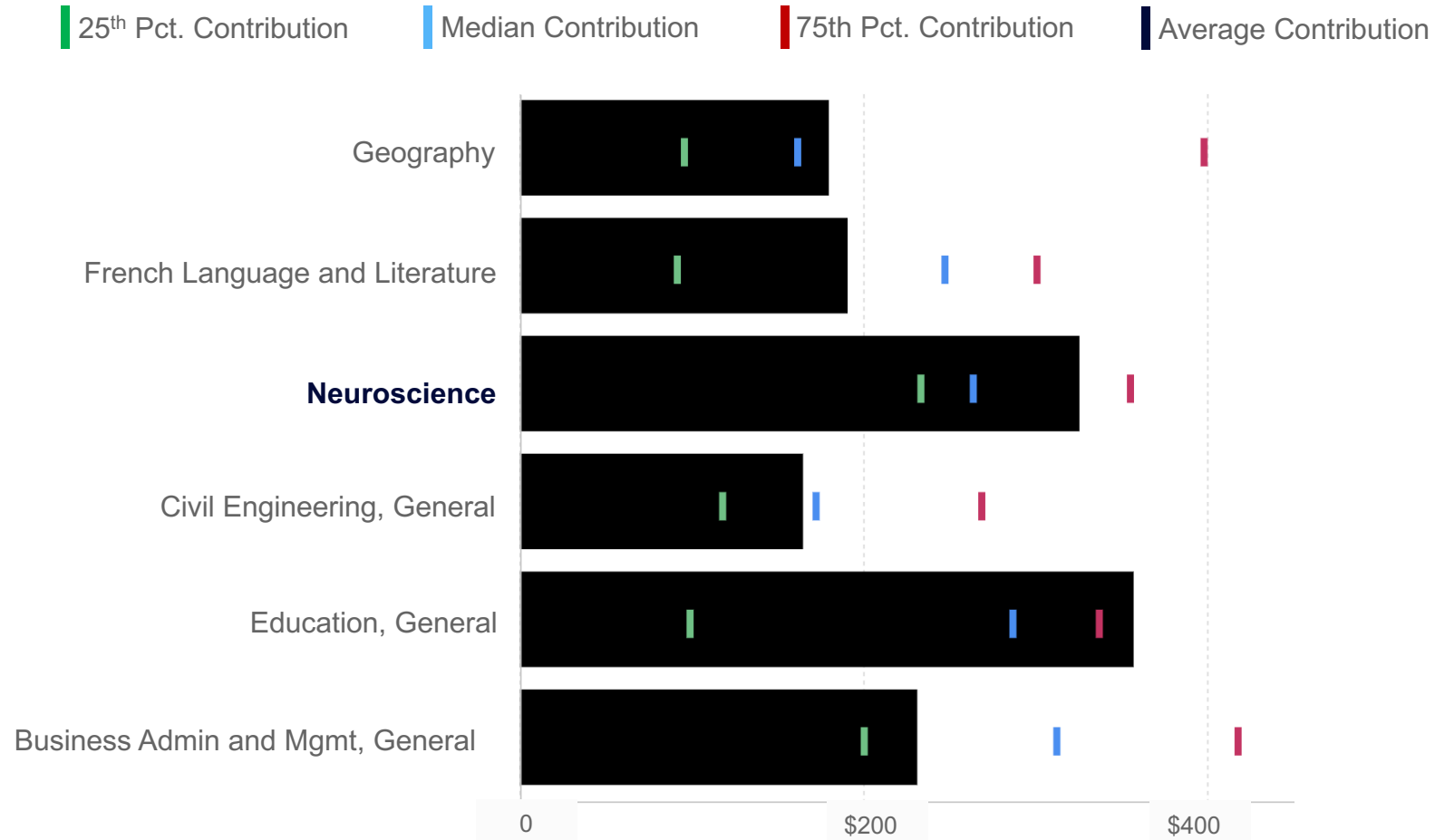
\* - Google search, employment data and Jobs Per Grad Ratio do not filter by award level.  
\*\* - Color scale in reverse.  
NA - No data available/not currently tracked.  
NS - Not Scored in Rubrics (values = 0).  
2-Yr - Associates & certificate programs only.  
PCTL - Percentile

Total Percentile	0	20+	40+	70+	90+	95+	98+	100
Total Score	-50	-20	-18	-1	9	15	24	49

** Color Scale in Reverse								
Percentile (Reverse)	<02	02+	05+	10+	30+	60+		

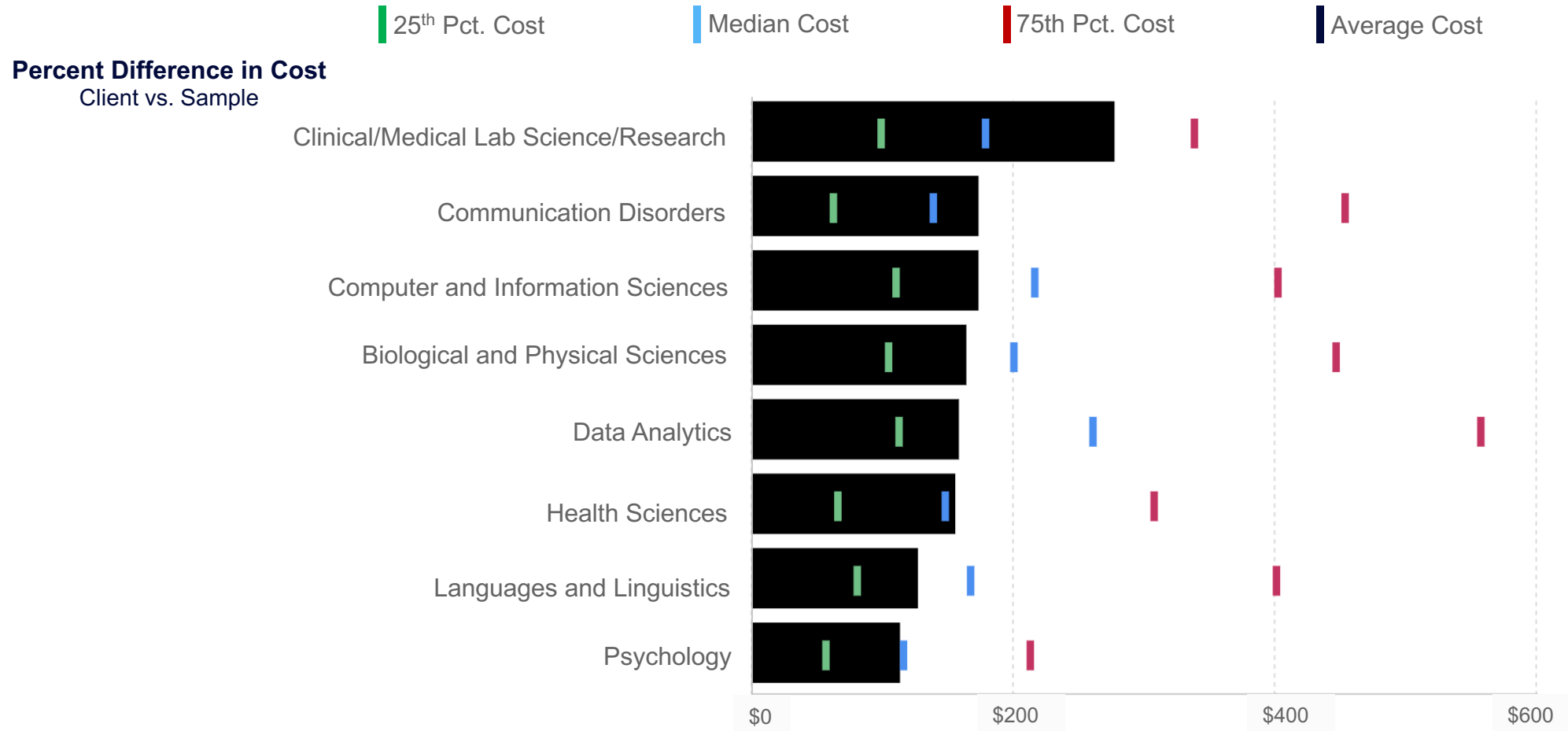


## Benchmarking Programs: Contribution Margins/Student Credit Hour





## Benchmarking Courses: Instructional Cost/SCH, Neuroscience-related courses



**Lower variance than benchmarks indicates costs are more controlled.**

**The illustrative client's costs are 16% lower than the benchmark for Bio/Physical Sciences.**

Avg. Cost/SCH, Client

**\$151**

Avg. Cost/SCH, Sample

**\$181**

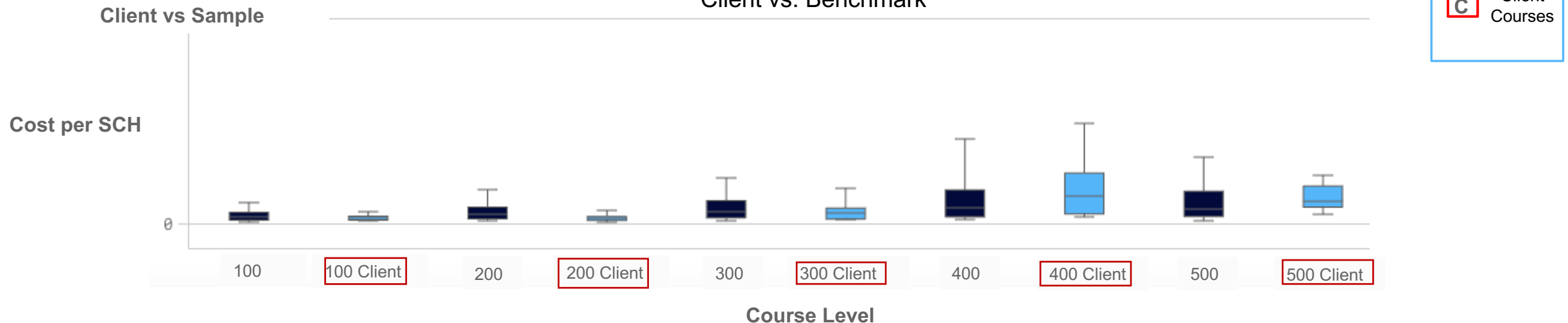
Percent Difference

**-16%**

Total Cost Difference

**-786.9k**

**Cost: Student Credit Hour by Course Level,  
Biological and Physical Sciences**  
Client vs. Benchmark



# Agenda

## Student Demand

- Leading Indicators: Google
- Recent Trends: Enrollment
- Non-Degree Courses

## Employment: Current Indicators

## Program of the Month

## Summary

## Summary

- Demand for bachelor and master's programs is strong.
  - Google searches rose 3% in May 2023.
  - Google searches for Business Analytics grew the fastest – 218% – in May 2023.
  - New enrollment growth in bachelor's programs is slightly down.
    - Master's is down 9%.
- Business Analytics had the fastest-growing enrollment at the bachelor's level.
  - IT Project Management was the fastest-growing master's program.
- In May, job postings were down 28% year-over-year, but up 13% month-over-month.
- Demand for Neuroscience programs is healthy.
  - Volume metrics are favorable, and the program is growing.
  - Wages for graduates are high.
  - This program is very competitive, but there is no online presence.

## Grow Grow Grow: Growth Strategies in Higher Education

Listen on Spotify



Listen on Apple



## Upcoming Webinars

Topic	Date
Demand Trends Webcast: Community Colleges	<i>Wednesday</i> July 26 <sup>th</sup> at 2 PM ET
Demand Trends Webcast: Bachelor's and Above	<i>Thursday</i> June 27 <sup>th</sup> at 2 PM ET

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