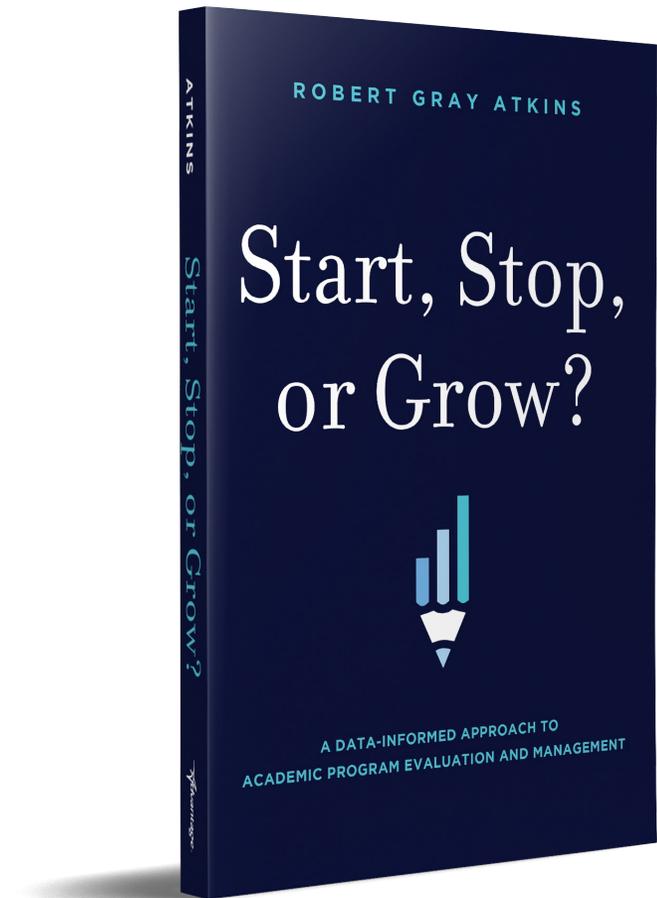




GRAY
ASSOCIATES

Demand for Higher Education Programs

Results through October 2022



Gray has developed a complete Program Evaluation System.



We do a few other things, too.

Pricing: Competitive research, discrete choice surveys, and pricing simulators

Location Analysis: AI models to find the best place to add a campus or market your programs

Financial Planning Models: Simulate events and decisions; provide Pro-forma 10-year financials

Choose a Program

- At the end of my presentation, we'll fire up PES and take requests for program scorecards
- If you have a program in mind, please let us know in the chat.
- However, we may not be able to get to all the requests in this meeting.
- If we don't get to your program, we will email its scorecard to you this week.

Agenda

Google Search

International Student Demand

Enrollment

Employment Trends

College Athletics

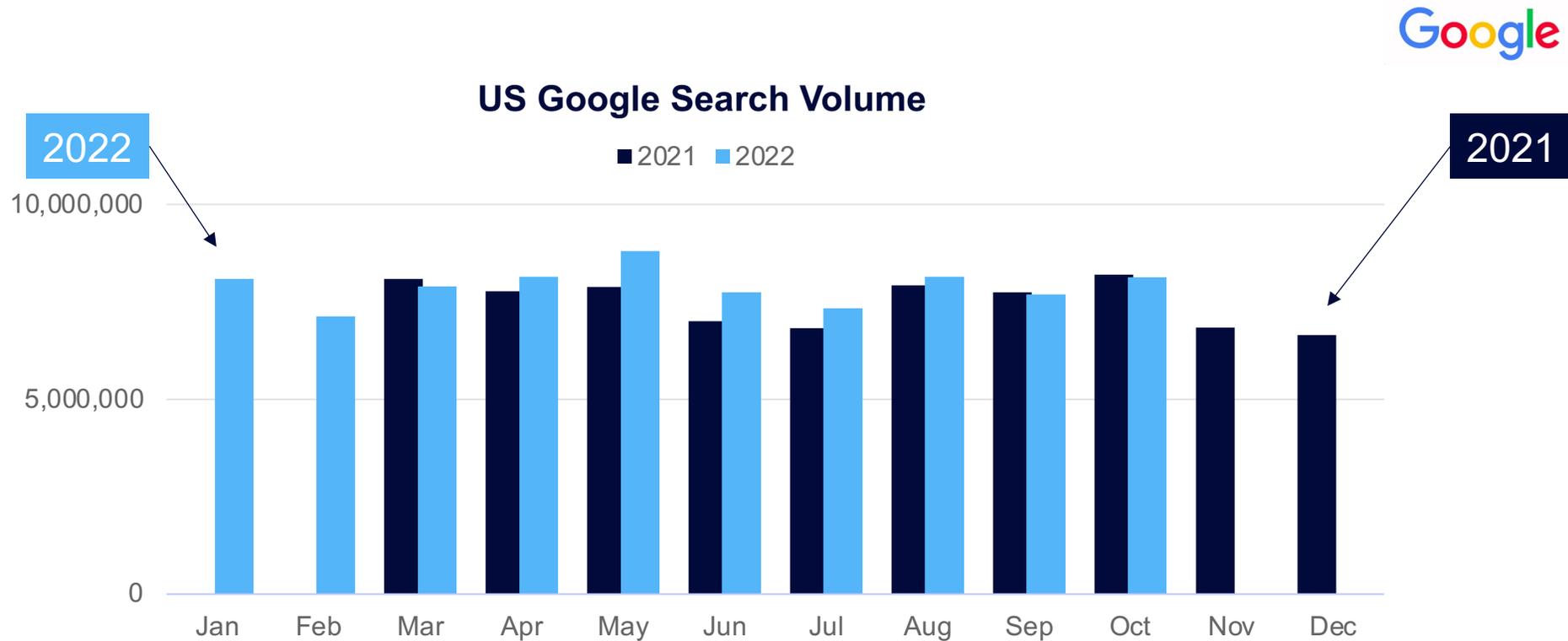
Non-Degree Courses

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 October, Google searches for academic programs rose 0.4% year-over-year.



Source: PES Keyword Search Dashboard

Google: US Top Bachelor's and Higher Degree Level Programs

In October, Registered Nursing had the highest search volume.



Programs with the Highest Volume of Keyword Searches
October 2022



Google search volume for standardized sets of academic keywords for academic programs..
Source: PES Keyword Search Dashboard

Google: US Fastest-Growing Programs

In October, searches for Data Analytics programs increased 404%.



- Arts
- Helping Professions
- Other

*Minimum 10,000 searches 2021

Google search volume for standardized sets of keywords for academic programs.

Source: PES Keyword Search Dashboard

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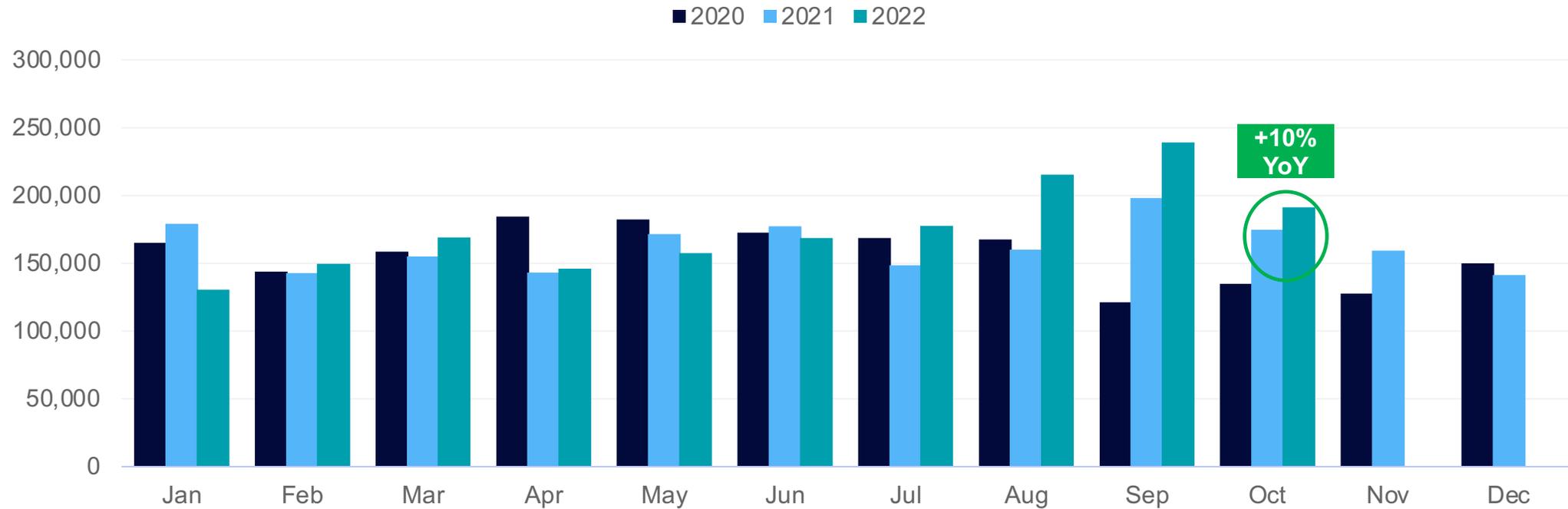
Program of the Month

Summary

International Student Demand

In October, international student interest in US programs increased 10% year-over-year.

International Page Views

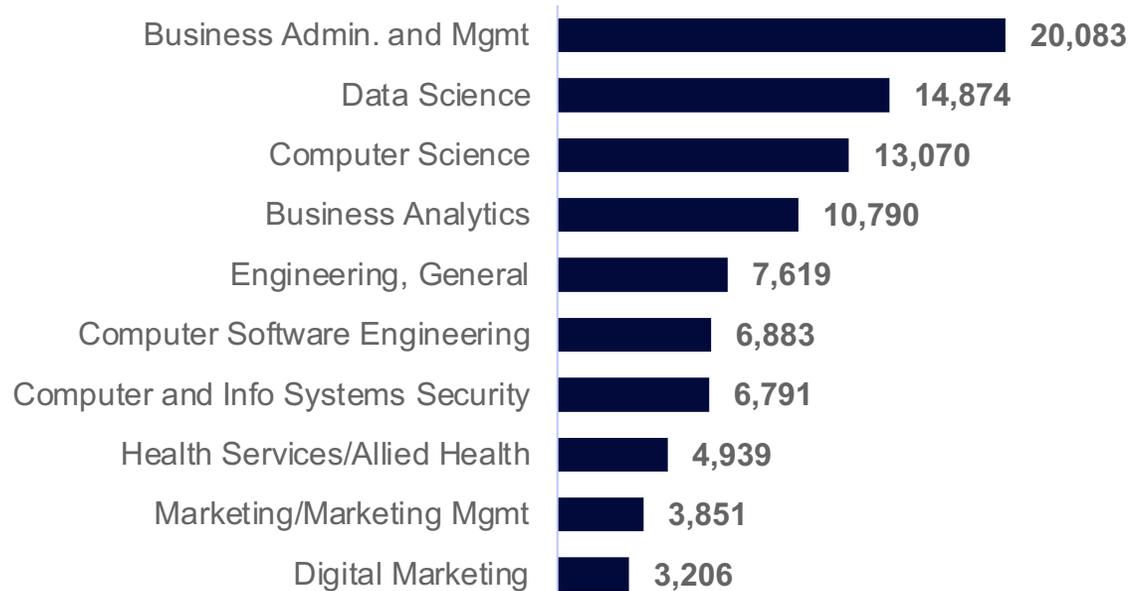


Source: PES International Student Demand Dashboard

International Student Demand

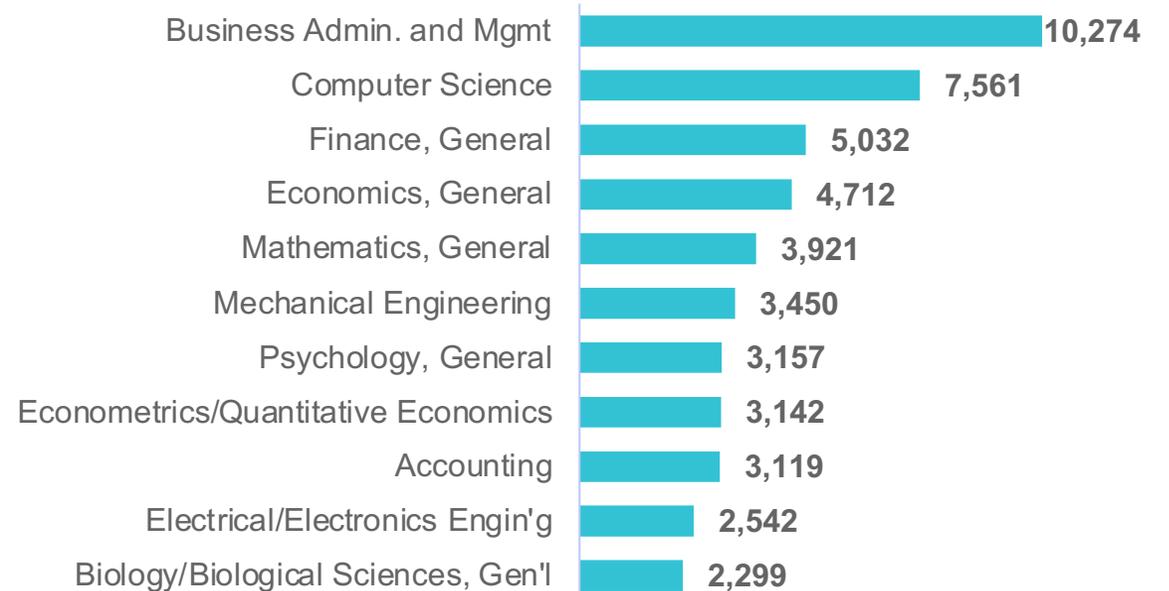
In October, the most-viewed programs were Business and Data Science

Top 10 Programs
International Page Views



The highest international student completions per 2020 total completions were in Business.

Highest Completions by Int'l Student Share
2020

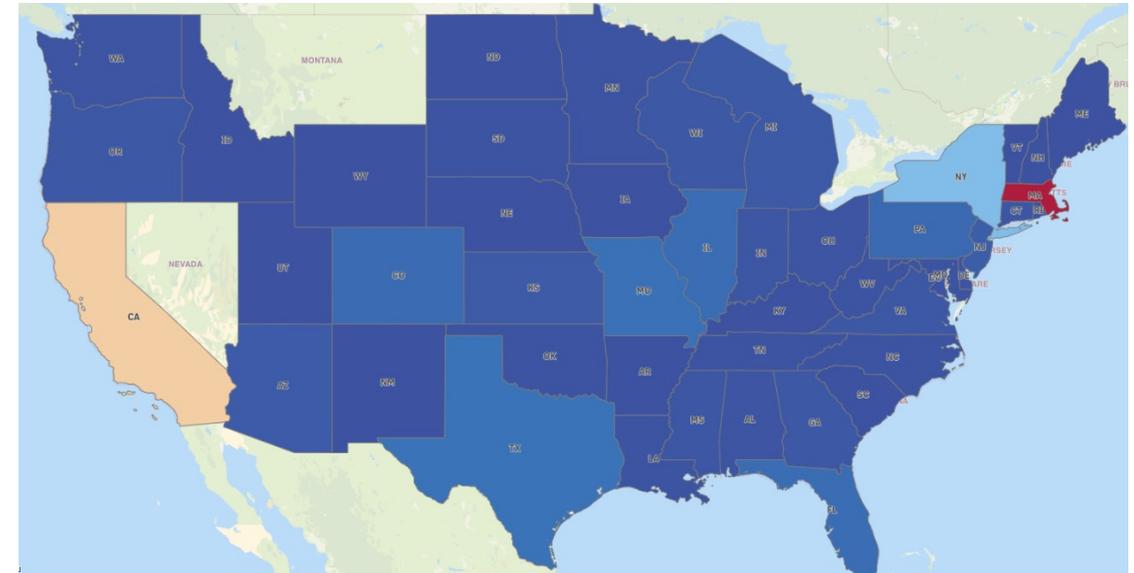
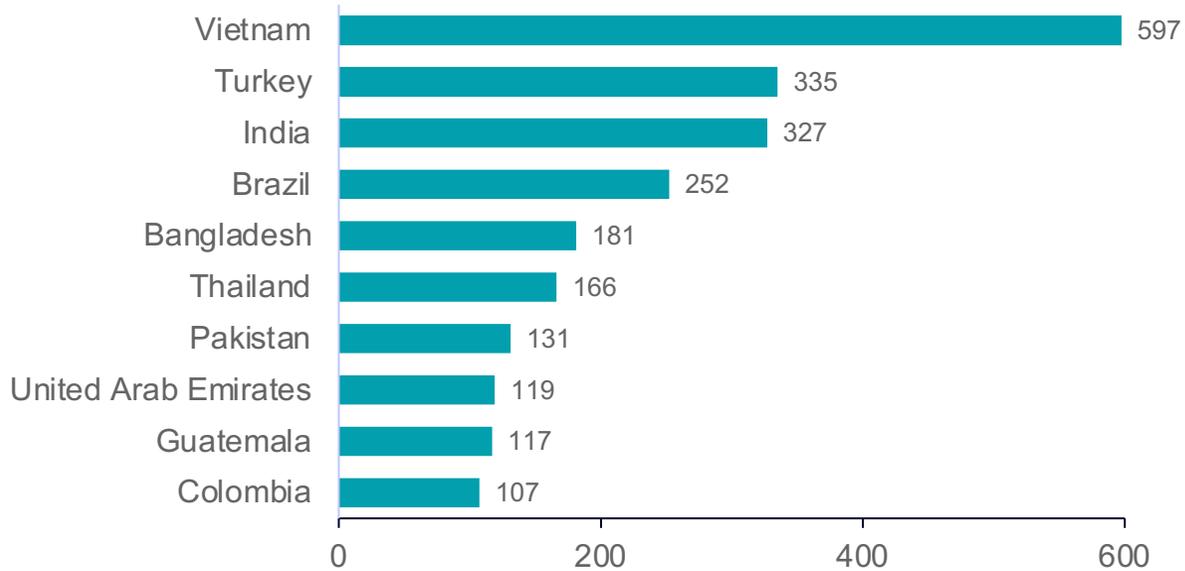


International Page Views: Marketing (9th in Highest Views)

Vietnam led in page views for Marketing

Massachusetts was the most popular destination for this program.

International Page Views by Originating Country
Marketing, October 2022



Source: PES International Student Demand Dashboard

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Non-Degree Courses

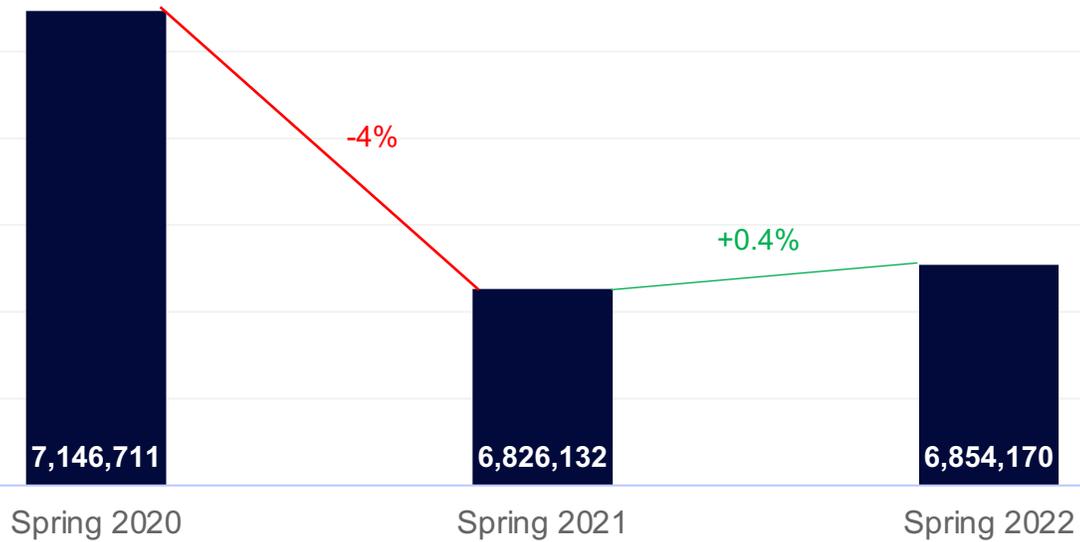
Program of the Month

Summary

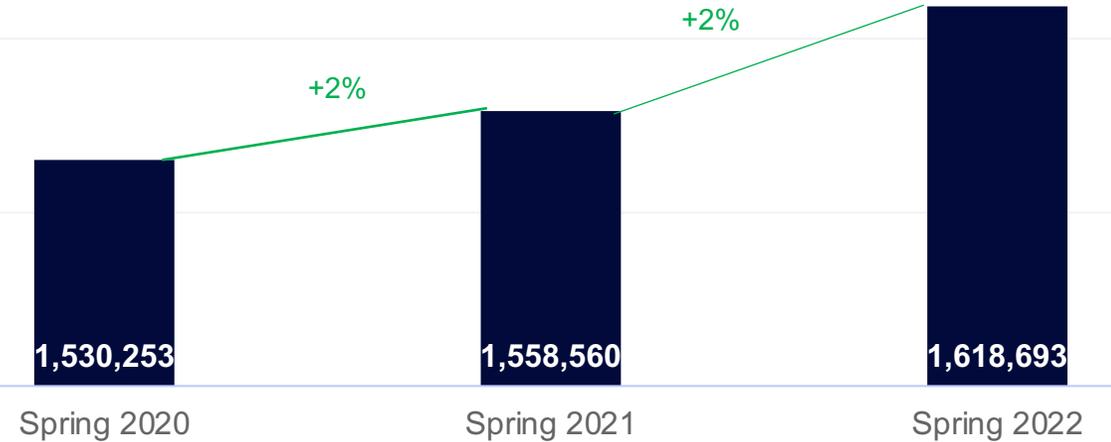
Total Enrollment, Bachelor's and Master's Programs

Spring 2022 enrollment grew!

Bachelor's Total Enrollment
Spring 2020-2022

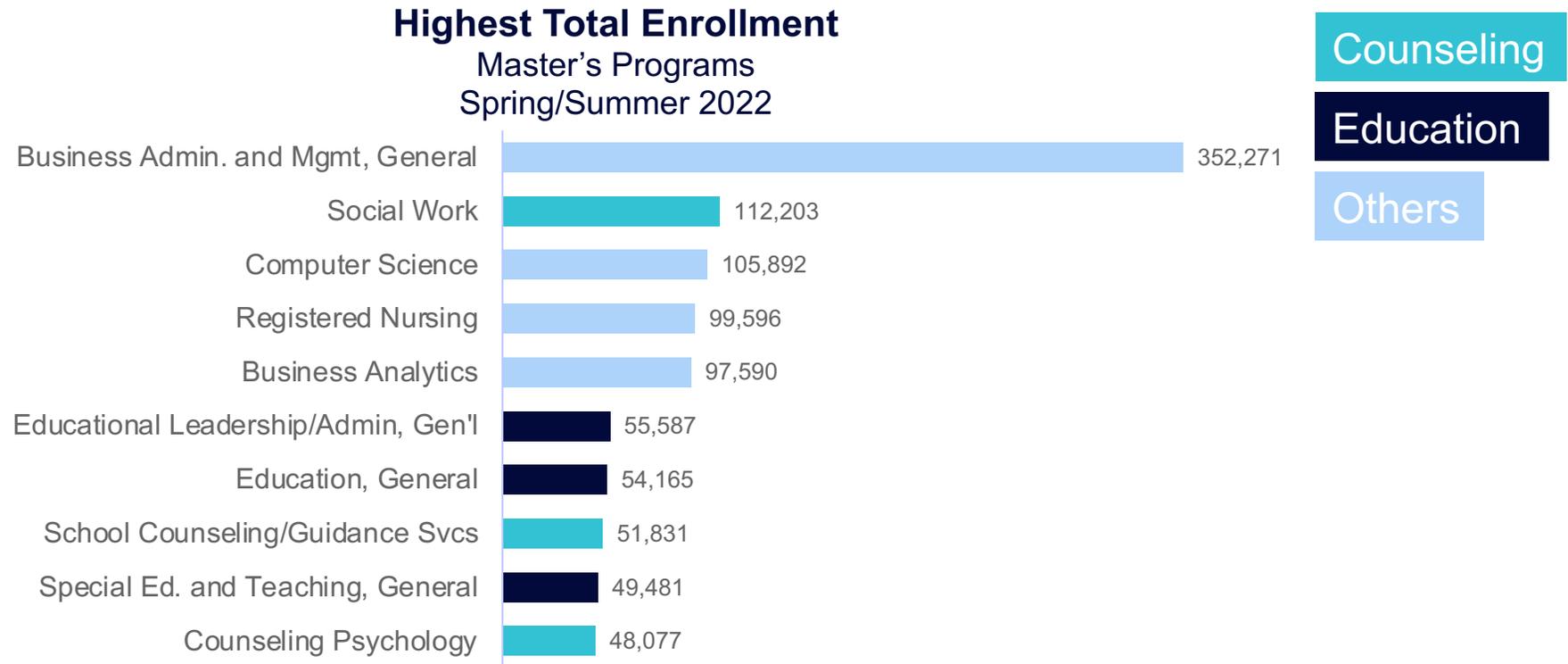


Master's Total Enrollment
Spring 2020-2022



Source: National Student Clearinghouse, Gray Analysis

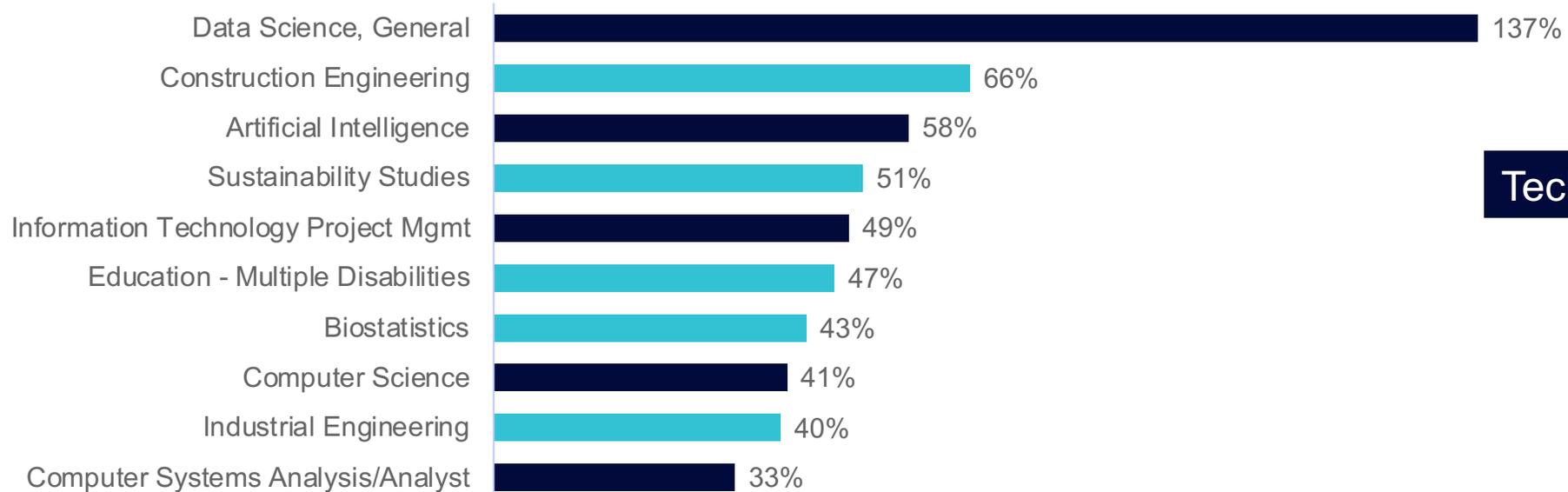
Master's programs: In Spring/Summer 2022, Business had the highest total enrollment.



Source: PES Program Enrollment Dashboard

Data Science enrollment grew 137% year-over-year.

Fastest-Growing Year-Over-Year Enrollment*
 Master's Programs
 Spring/Summer 2022

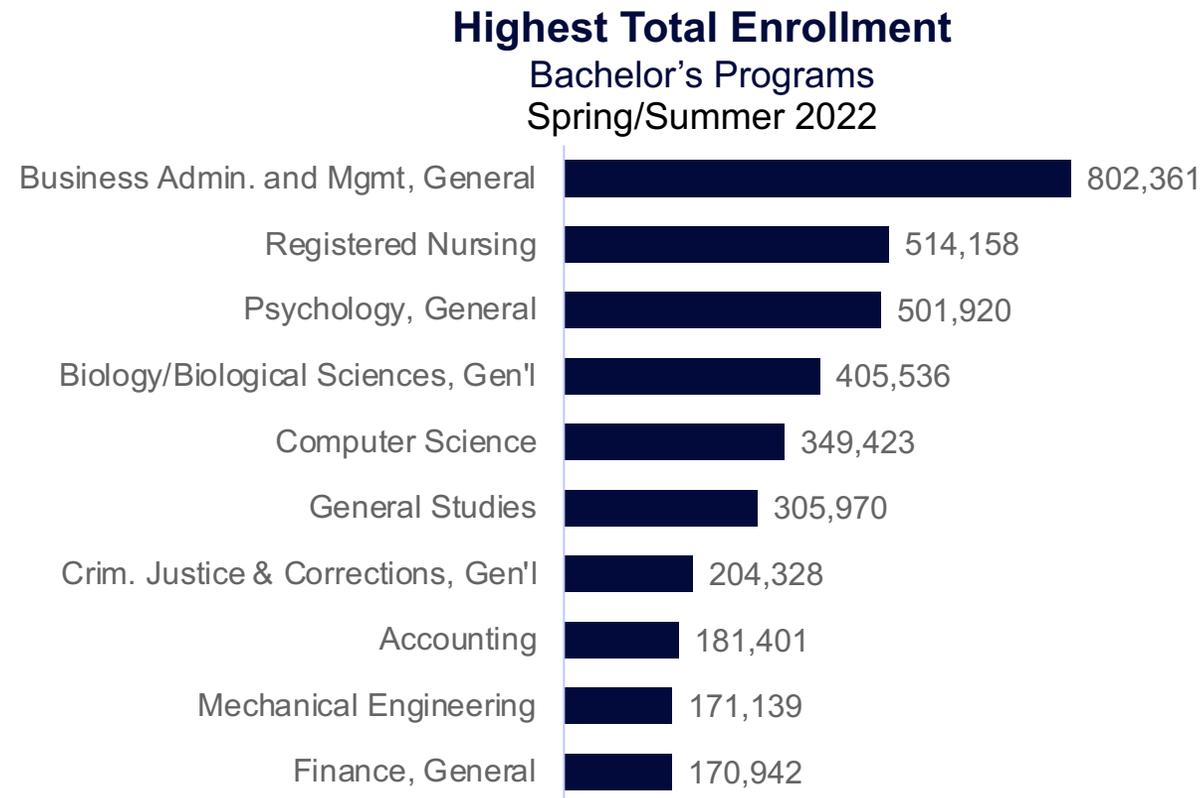


Tech

Source: PES Program Enrollment Dashboard

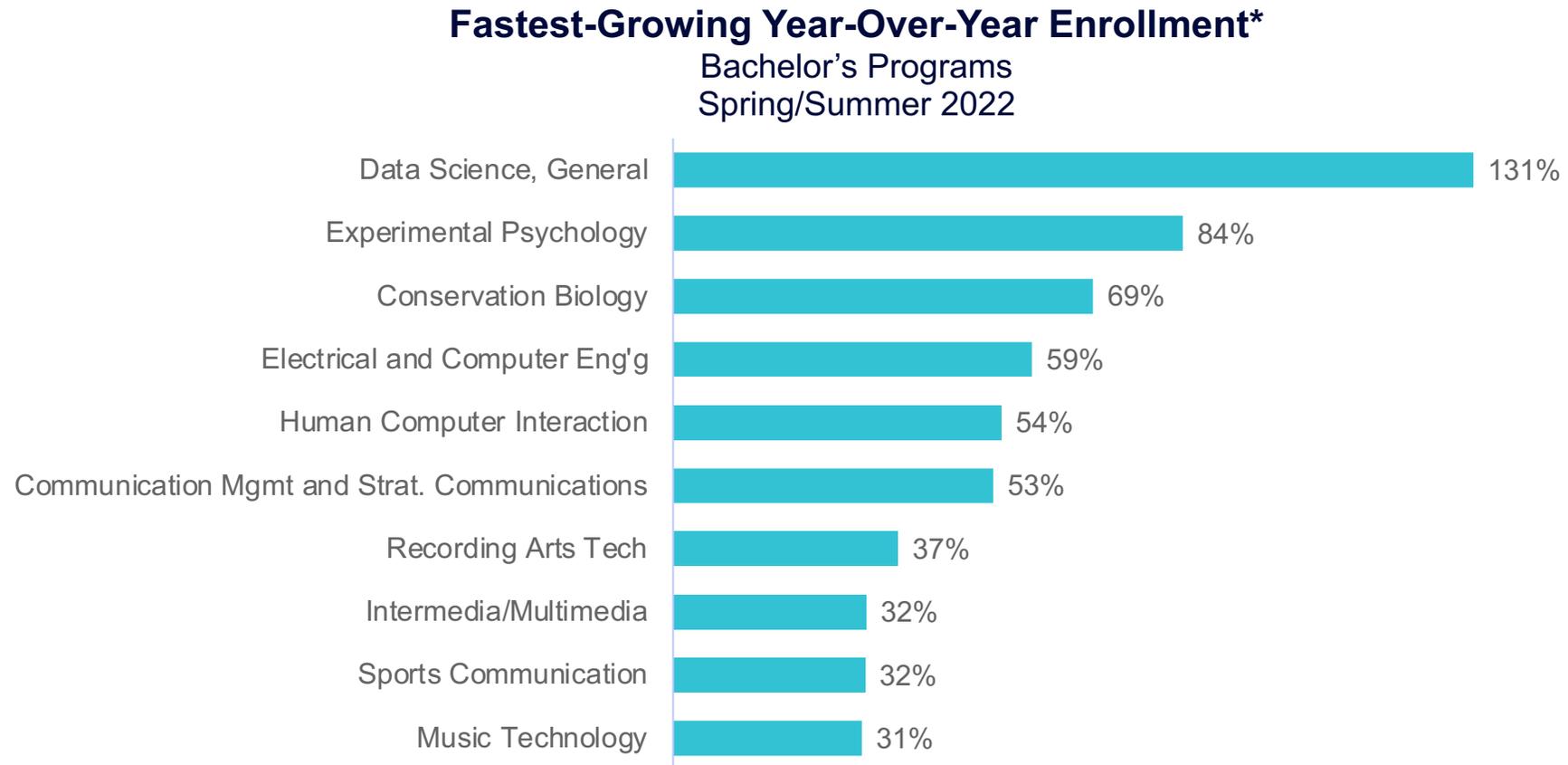
*Minimum 1,000 enrollees in Spring 2021

Bachelor's programs: In Spring/Summer 2022, Business had the highest total student enrollment.



Source: PES Program Enrollment Dashboard

Among bachelor's programs, Data Science grew the fastest.



Source: PES Program Enrollment Dashboard

*Minimum 1,000 enrollees Spring 2021

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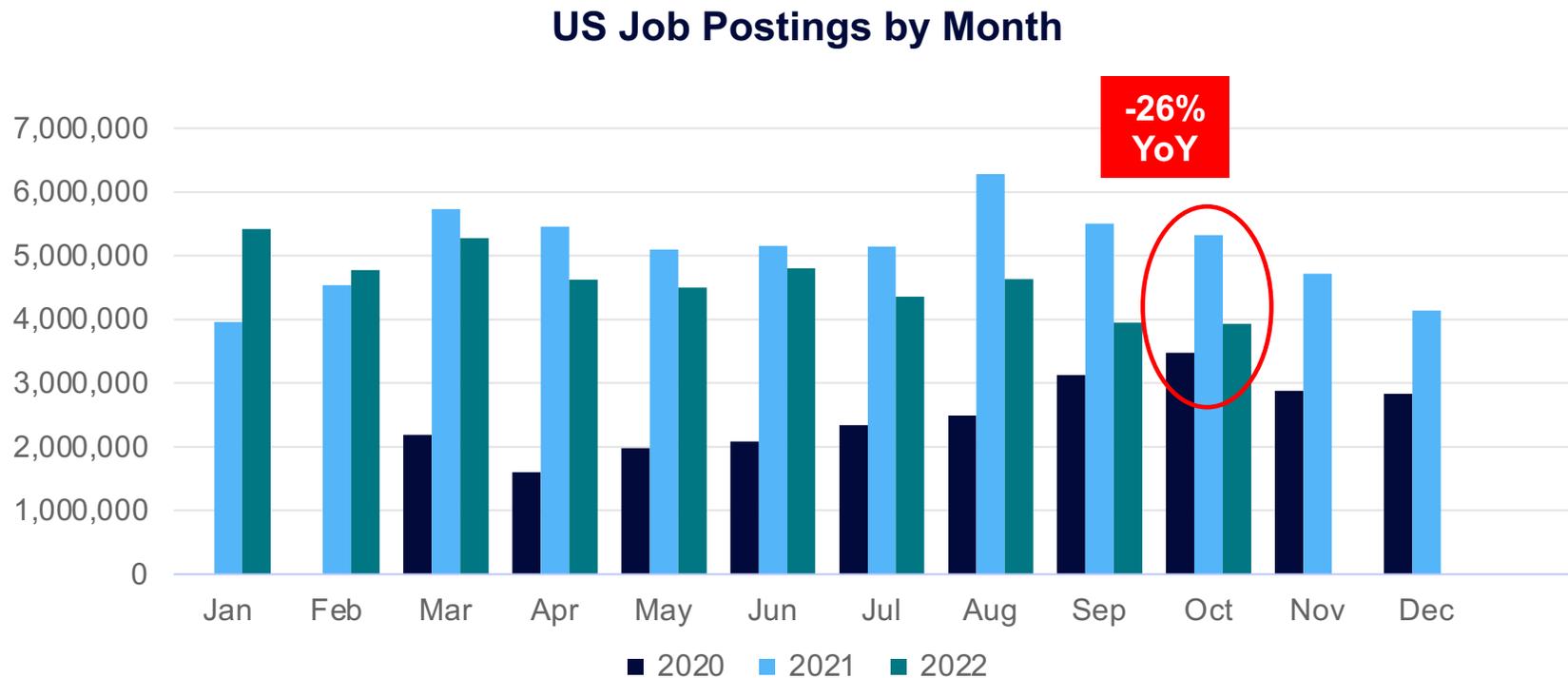
Non-Degree Courses

Program of the Month

Summary

In October 2022, job postings volume dropped 26% year-over-year.

- However, postings were still 80% higher than in March 2020 (just before COVID).



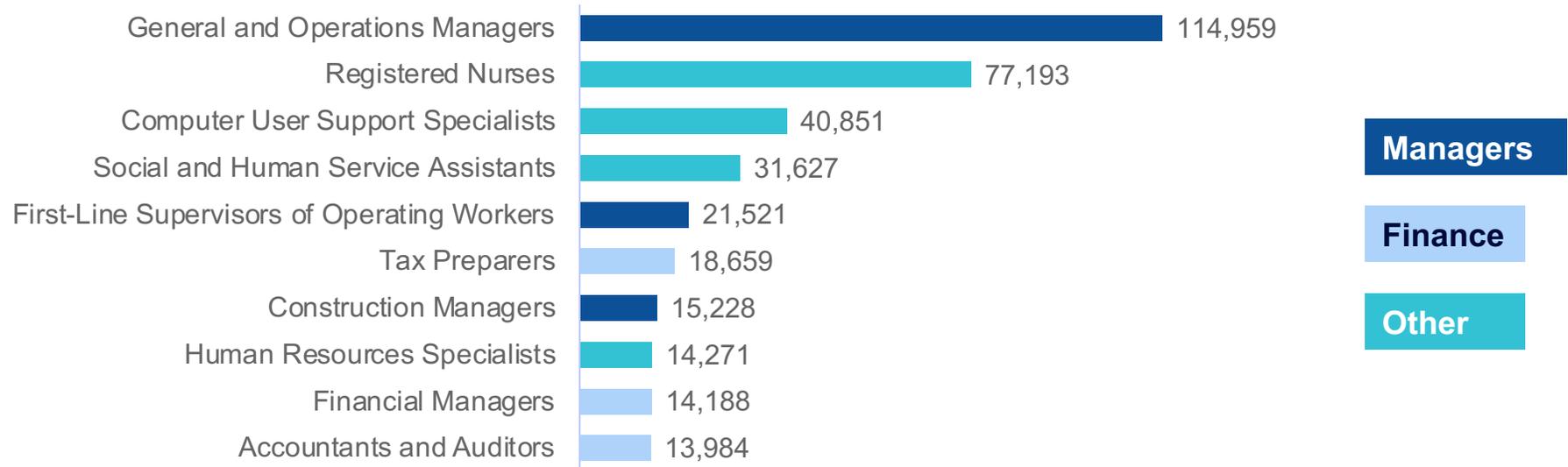
Source: PES Job Postings Dashboard

In October, Registered Nurses had the highest volume of job postings for bachelor's and above degree-holders.



In October, jobs for General and Operations Managers increased by over 114k year-over-year.

Job Postings Year-over-Year Growth (units)
By Standard Occupational Code
October 2022



Source: PES Job Postings Dashboard

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College Athletics

Non-Degree Courses

Program of the Month

Summary

Division I Athletics Benchmarking

In academic year 2020/21, men’s football had the highest number of participants.



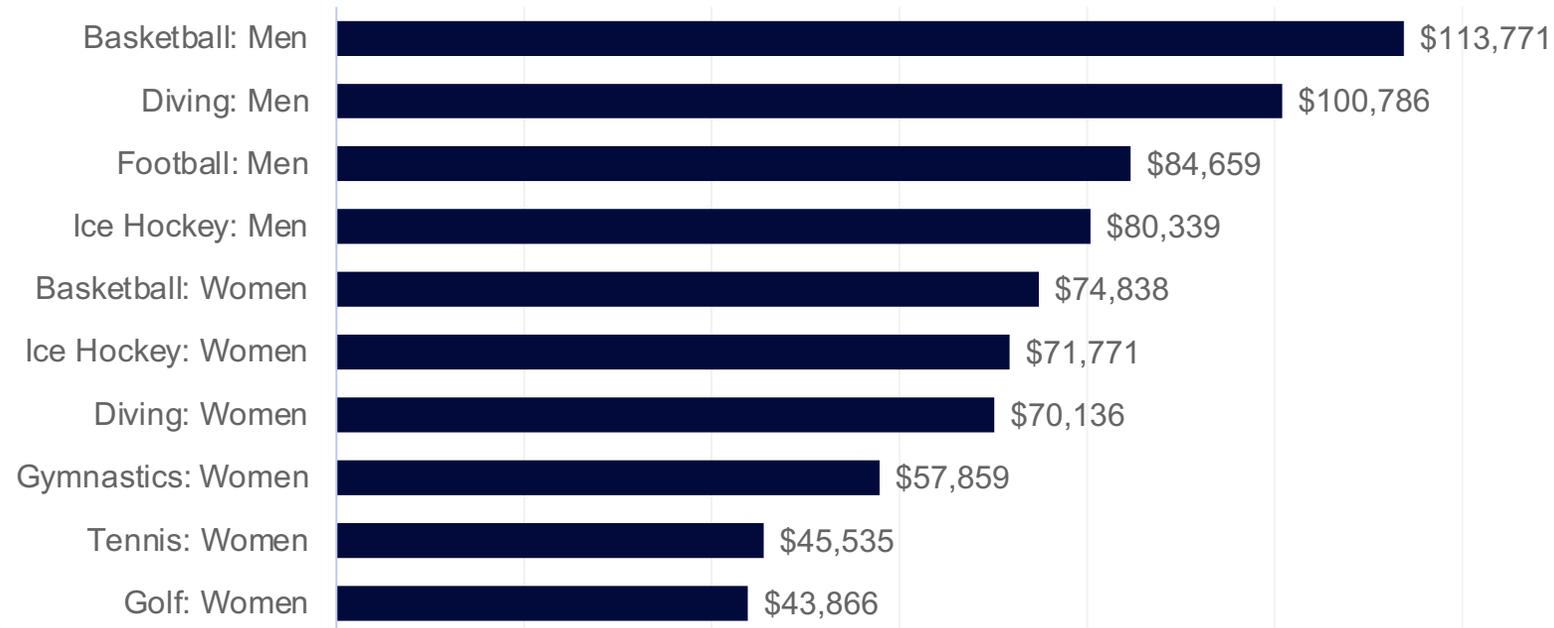
Source: Athletics Benchmarking Dashboard

Athletics Benchmarking

Men’s basketball had the highest expenses per participant.

Highest Expenses per Participant

Division I
2020-21



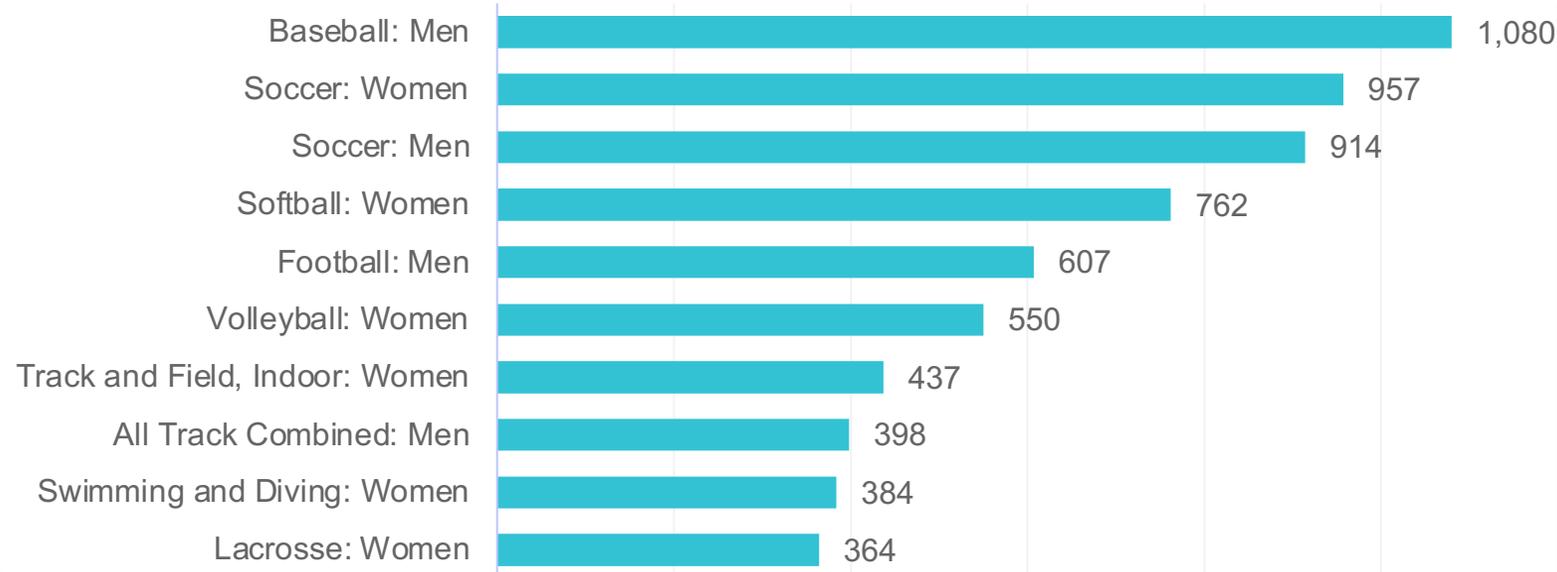
Source: Athletics Benchmarking Dashboard

Athletics Benchmarking

From academic year 2015/16 to 2018/19, pre-Covid, men’s baseball had the highest increase in total participants.

Highest Growth in Participants (units)

Division I
2015/16 – 2018/19



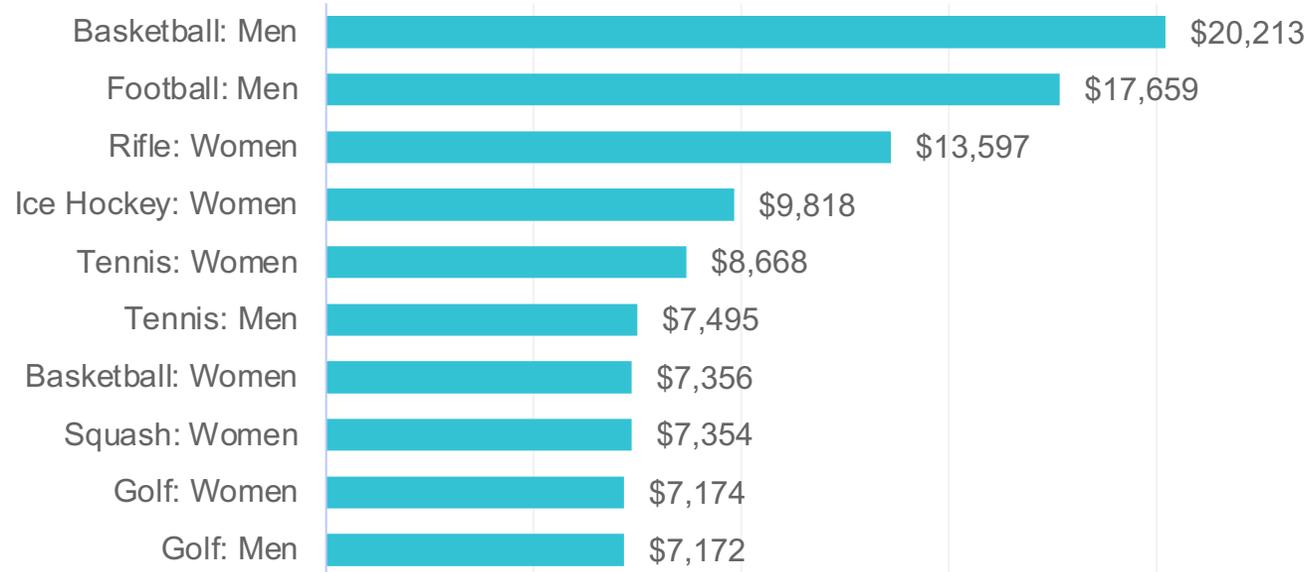
Source: Athletics Benchmarking Dashboard

Athletics Benchmarking

Men’s basketball had the highest growth in expenses per participant.

Highest Growth in Expenses (dollars)

Division I
2015/16 – 2018/19



Source: Athletics Benchmarking Dashboard

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Non-Degree Courses

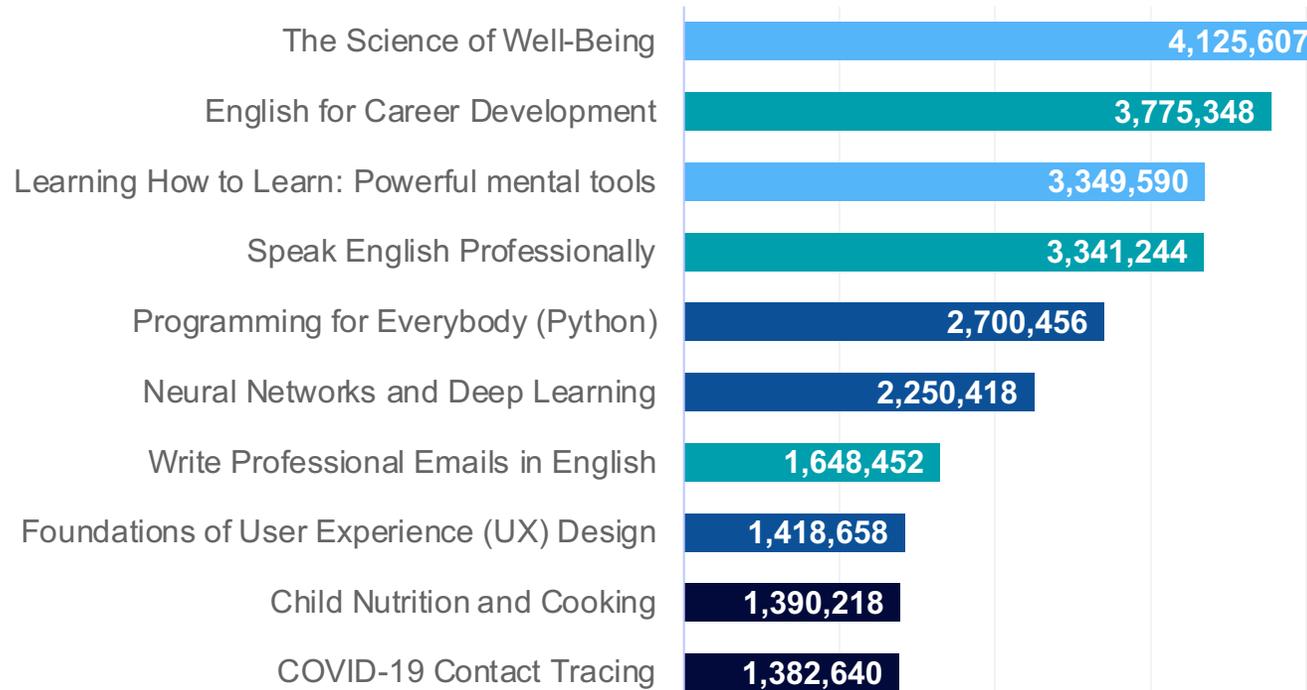
Program of the Month

Summary

Coursera: Highest Cumulative Course Enrollment

In October, three English language courses were in the top 10.

Highest Course Enrollment Volume
October 2022



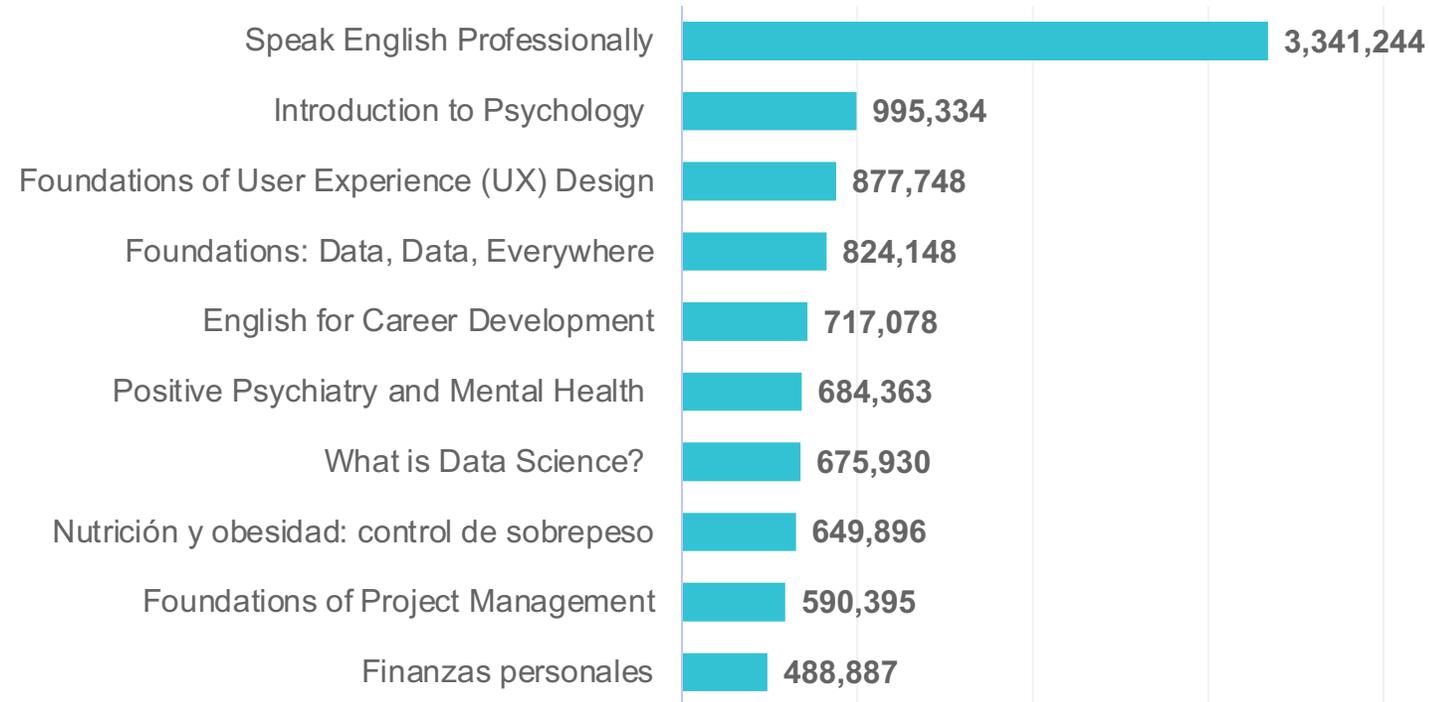
- Personal Growth
- English Language
- Tech
- Others

Source: PES Non-Degree Demand: Coursera

Coursera: Fastest-Growing Courses

In October, Speak English Professionally added the most students year-over-year.

Highest Year-Over-Year Unit Change in Enrollment
October 2022



Udemy: Personal Development is one of the most popular categories.

Is there an untapped opportunity in higher education?

Highest Year-Over-Year Unit Change in Enrollment Year-to-Date 2022



Personal Development > Happiness > Positive Psychology

Be Happier with Positive Psychology

The Science of Psychology & Happiness Shows Tested Ways to Increase Your Well-Being and Life Satisfaction

4.5 ★★★★★ (10,049 ratings) 24,876 students

Created by [Andrew Luttrell, Ph.D.](#)

Certified Alternative Healing Practitioner | ACCREDITED

Become A Soul Care Provider, Get a Healing Certificate. Be a Spiritual Counselor, Comfort Others, Positive Psychology!

Highest rated 4.9 ★★★★★ (378 ratings) 1,299 students

Created by [Sufani Garza, Place of Bliss Academy](#)

🕒 Last updated 10/2022 🌐 English 🗣️ English [Auto]

Agenda

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International Student Demand

Enrollment

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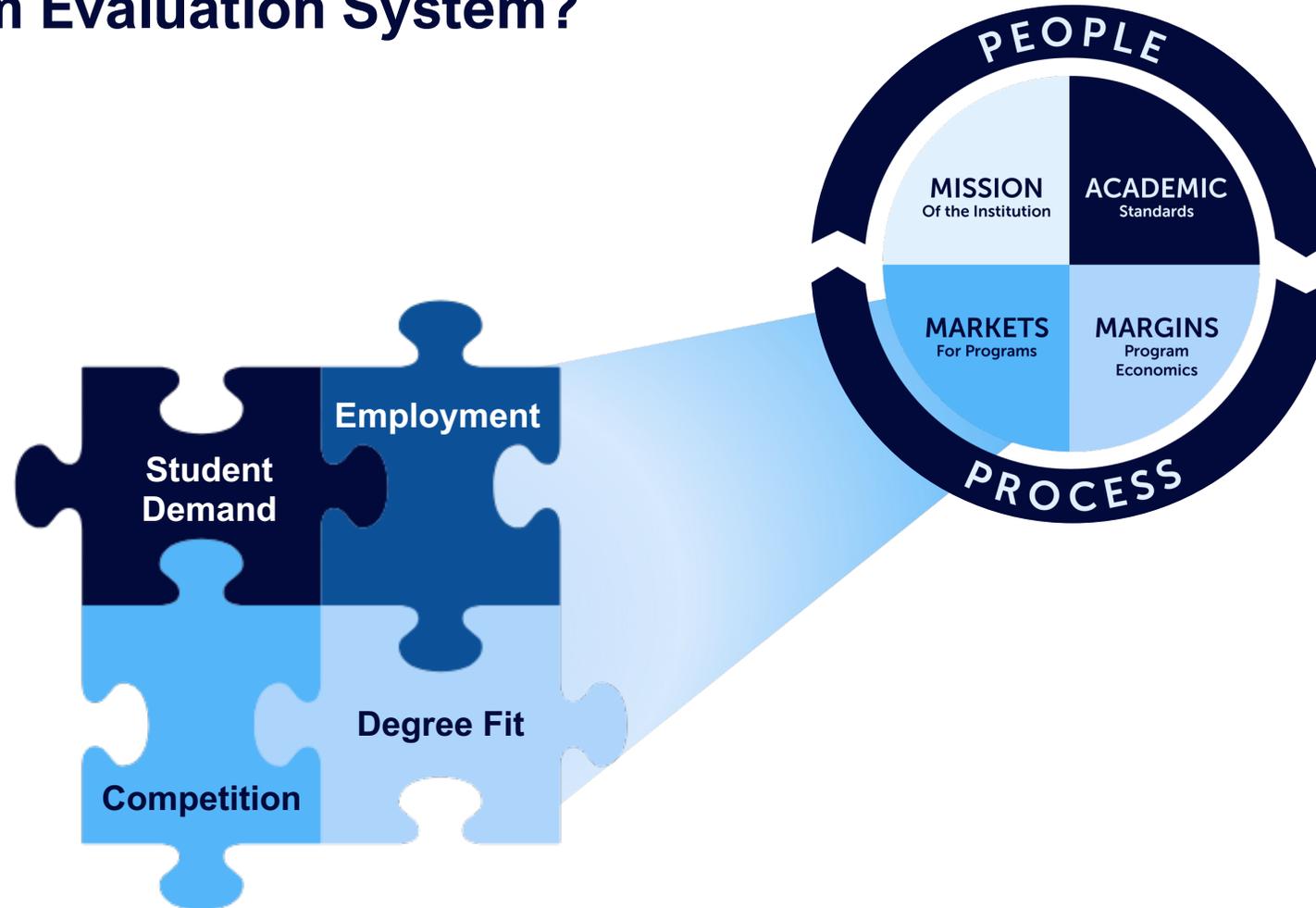
College Athletics

Non-Degree Courses

Program of the Month

Summary

What is a Program Evaluation System?



Program Markets: Program Rank

We score on Student Demand, Employment, Competitive Intensity, and Degree Fit.

- Let's focus on the national market for Human Computer Interaction.

US Program Ranking Bachelor's Programs

CIP	Total Percentile	Student Demand Percentile	Competitive Intensity Percentile	Employment Percentile	Degree Fit Percentile
26.0406 Cell/Cellular and Molecular Biology	96	93	84	90	50
15.1001 Construction Engineering Tech	96	92	93	84	50
29.0201 Intelligence, General	96	87	96	92	50
26.0901 Physiology, General	96	85	99	82	50
26.0701 Zoology/Animal Biology	96	85	96	92	50
14.4701 Electrical and Computer Eng'g	96	85	40	99	50
14.0401 Architectural Engineering	96	85	32	99	50
30.3101 Human Computer Interaction	96	83	96	92	50
14.0803 Structural Engineering	96	80	50	99	50
51.1010 Cytogenetics/Genetics/Clinical Genetics Tech	96	77	99	88	50
26.0999 Physiology/Pathology/Related Sciences, Other	96	77	99	82	50
26.0707 Animal Physiology	96	14	99	90	50
45.0401 Criminology	95	98	32	15	50
09.0101 Speech Communication and Rhetoric	95	97	40	27	50
30.1901 Nutrition Sciences	95	95	40	76	50
51.0204 Audiology/Speech-Lang. Pathology	95	92	40	92	50
45.9999 Social Sciences, Other	95	83	90	95	50
14.1301 Engineering Science	95	83	40	98	50
01.0103 Agricultural Economics	95	77	97	92	50
40.0000 Management Science, Administration, and Marketing	95	77	97	92	50

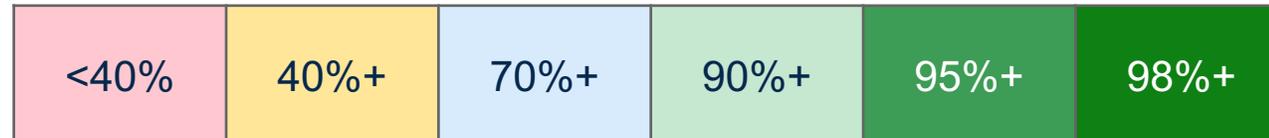
Total Percentile	0	20+	40+	70+	90+	95+	98+	100
Total Score	-49	-21	-18	0	11	18	24	54

Source: PES Markets

Program Scorecard: Percentiles

All data are color-coded by their percentile rank in the local market compared to over 1,400 IPEDS programs (CIP codes).

Percentile Color-Code:



Program Scorecard: Student Demand

Human Computer Interaction scores in the 83rd percentile for Student Demand.

- New student enrollment is healthy but declined 57% year-over-year.
- Online completions are in the 95th percentile.
 - Overall completions grew 2% year-over-year.
- International demand for Human Computer Interaction is in the 96th percentile.
- Google search volume is fair.
 - It grew 18% year-over-year.

Student Demand				
Score: 7 Percentile: 83				
Catego...	Pctl	Criterion	Value	Score
Size	48	Google Search Volume (3 Months)*	7,930	0
	96	International Page Views (12 Months)	933	NS
	88	New Student Enrollment Volume (12 Mo.)	864	2
	72	On-ground Completions at In-Market Institutions	277	1
	95	Online Completions by In-Market Students	348	3
	80	Sum of On-ground and Online Completions	625	1
Growth	62	Google Search YoY Change (Units)*	1,210	1
	0	New Student Enrollment Vol. YoY Change (Units)	-1,131	-1
	75	Completion Volume YoY Change (Units)	10	1
	73	Google Search YoY Change (%)*	18%	0
	9	New Student Enrollment Vol. YoY Change (%)	-57%	-1
	55	Completion Volume YoY Change (%)	2%	0

Program Scorecard: Employment

Human Computer Interaction ranks in the 92nd percentile for Employment.

- Job volume is moderate for this program.
 - However, it grew 4% annually over the last three years.
- Job postings per graduate are low.
- Wages are in the 98th percentile for early career and 90th for mid-career.

Employment*

Score: 9 Percentile: 92

Category	Pctl	Criterion	Value	Score
Size: Direct Prep	58	Job Postings Total (12 Months)*	2,649	0
	49	BLS Current Employment*	5,552	0
	47	BLS Annual Job Openings*	416	NS
Size: ACS Bach. Outcomes	55	Job Postings Total (12 Months)*	1,232	NS
	51	BLS Current Employment*	4,595	NS
Growth (Direct Prep)	65	BLS 1-Year Historical Growth*	-1.8%	NS
	84	BLS 3-Year Historic Growth (CAGR)*	3.5%	0
	75	BLS 10-Year Future Growth (CAGR)*	1.0%	0
Saturation (Direct Prep)	54	Job Postings per Graduate*	1.7	0
	41	BLS Job Openings per Graduate*	0.3	NS
Wages (Direct Prep)	82	BLS 10th-Percentile Wages*	\$52,557	NS
	75	BLS Mean Wages*	\$83,053	NS
National American Community Survey Bachelor's Degree Outcomes	98	Wages (Age < 30)	\$70,930	9
	90	Wages (Age 30-60)	\$129,496	6
	52	% with Any Graduate Degree	39%	NS
	64	% with Masters	30%	NS
	55	% with Doct/Prof Degree	9%	NS
	98	% Unemp. (Age <30)**	6%	-5
	73	% Unemp. (Age 30-60)**	2%	-1
55	% in Direct Prep Jobs	7%	NS	

Human Computer Interaction Top Occupations with Average Mid-Life Income

Top Occupations by Population

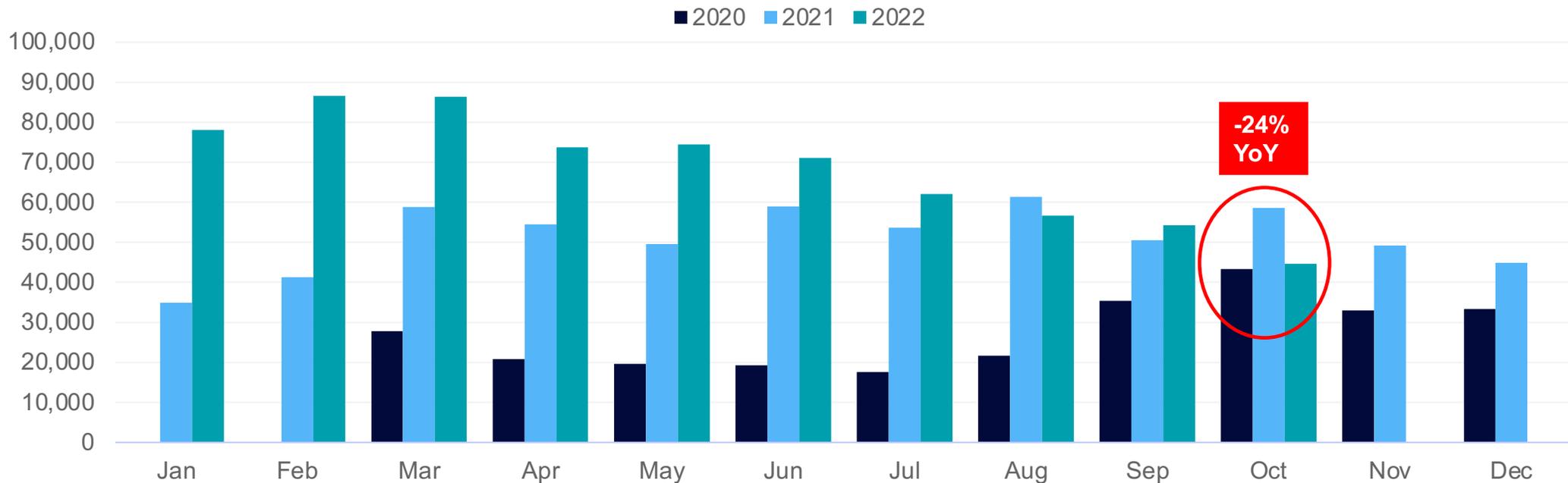
Average Income



In October, job postings for graduates in Human Computer Interaction decreased 24%.

However, they rose 60% since March 2020, before the pandemic.

Job Postings Volume, Human Computer Interaction



Source: PES Job Postings Dashboard

Job Postings: Human Computer Interaction

Computer Engineers and IT Project Managers were in high demand.

**Highest Volume Job Postings
Human Computer Interaction
October 2022**



Source: PES Job Postings Dashboard

Program Scorecard: Competitive Intensity

There may be room in the market for a new Human Computer Interaction program.

- Nine institutions graduate students in this program.
 - 56% of graduates are online.
- Average and median program sizes are very high, and the median grew 38% year-over-year.
- The Google Competition Index is fair.

Competitive Intensity Score: 4 Percentile: 96

Category	Pctl	Criterion	Value	Score
Volume of In-Market Competition	62	Campuses with Graduates**	9	0
	83	Campuses with Grads YoY Change (Units)**	1	-1
	77	Institutions with Online In-Market Students**	1	NS
In-Market Program Sizes	83	Average Program Completions	31	0
	93	Median Program Completions	32	2
	98	YoY Median Prog. Compl. Change (Units)	9	3
	90	YoY Median Prog. Compl. Change (%)	38%	1
In-Market Saturation	71	Google Search * Cost per Click**	\$8	-1
	80	Google Competition Index**	0.53	0
National Online Competition	76	National Online Institutions (Units)**	1	NS
	78	Nat'l Online % of Institutions	10%	NS
	96	Nat'l Online % of Completions	56%	NS

Program Scorecard: Degree Fit

A bachelor's or master's degree is an appropriate award level for Human Computer Interaction.

- 39% of completions are at the bachelor's level.
- 39% are at the master's level.
- 48% of the national workforce have a bachelor's.

Degree Fit:

Score: 0 Percentile: 50

National Completions by Level

Score: 0

Award Level	Completions (National)	Completions (Market)	Enrollment (Market)
Certificate	11%	11%	4%
Associates	6%	6%	2%
Bachelors	39%	39%	74%
Postbaccalaureate Certificate	2%	2%	0%
Masters	39%	39%	20%
Post-masters Certificate	2%	2%	0%
Doctoral	1%	1%	0%
Unknown	0%	0%	0%

National Workforce Ed. Attainment

Score: 0

Award Level	BLS Educational Attainment
No College	7%
Some College	12%
Associates	8%
Bachelors	48%
Masters	20%
Doctoral	4%

Human Computer Interaction 2021-22 Enrollment per Capita by State

The highest opportunity to enter the market for this program is in South Dakota; the lowest is in Arizona.

Enrollment per Capita, Ages 19-54
Human Computer Interaction

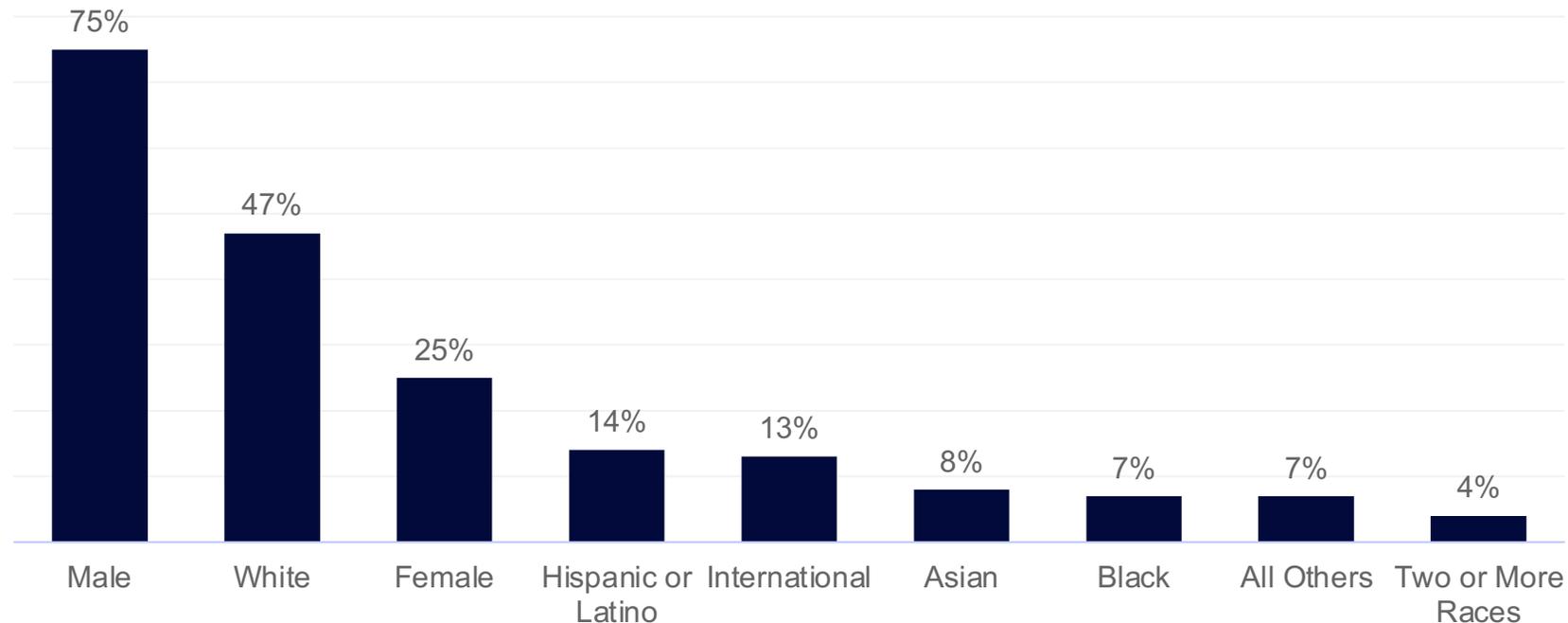


Demographics

In 2020, men made up 75% percent of completions for Human Computer Interaction.

- After Whites, Hispanics had the highest percentage of completions.

2020 Completions by Demographic Group



Source: Gray's PES Markets

Program Scorecard: Human Computer Interaction ranks in the 96th percentile.

CIP: 30.3101 Human Computer Interaction |
 Market: National |
 Award Level: Bachelors |
 Select Program
Export PDF Support

CIP: 30.3101 Human Computer Interaction
Market: National

Total Score: 20
Percentile: 96

Student Demand

Score: 7 Percentile: 83

Catego...	Pctl	Criterion	Value	Score
Size	48	Google Search Volume (3 Months)*	7,930	0
	96	International Page Views (12 Months)	933	NS
	88	New Student Enrollment Volume (12 Mo.)	864	2
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	55	% with Doct/Prof Degree	9%	NS
98	% Unemp. (Age < 30)**	6%	-5	
73	% Unemp. (Age 30-60)**	2%	-1	
55	% in Direct Prep Jobs	7%	NS	

Degree Fit:

Score: 0 Percentile: 50

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

National Completions by Level

Score: 0

Award Level	Completions (National)	Completions (Market)	Enrollment (Market)
Certificate	11%	11%	4%
Associates	6%	6%	2%
Bachelors	39%	39%	74%
Postbaccalaureate Certificate	2%	2%	0%
Masters	39%	2%	20%
Post-masters Certificate	2%	2%	0%
Doctoral	1%	1%	0%
Unknown	0%	0%	0%

National Workforce Ed. Attainment

Score: 0

Award Level	BLS Educational Attainment
No College	7%
Some College	12%
Associates	8%
Bachelors	48%
Masters	20%
Doctoral	4%

Competitive Intensity

Score: 4 Percentile: 96

Category	Pctl	Criterion	Value	Score
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	83	Campuses with Grads YoY Change (Units)**	1	-1
	77	Institutions with Online In-Market Students**	1	NS
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	78	Nat'l Online % of Institutions	10%	NS
	96	Nat'l Online % of Completions	56%	NS

CIP Description:

An interdisciplinary program that focuses on the study of the interaction between people and technology and how that technology impacts society, and combines disciplines within the fields of computing and information science (information systems, software engineering, artificial intelligence and design), engineering, and the behavior sciences (cognitive science, cognitive psychology, sociology, organizational psychology, and social psychology). Includes instruction in information technology, cognitive and behavioral sciences, and systems design.

** Color Scale in Reverse

Percentile (Reverse)	<02	02+	05+	10+	30+	60+
----------------------	-----	-----	-----	-----	-----	-----

Total Percentile	0	20+	40+	70+	90+	95+	98+	100
Total Score	-49	-21	-18	0	11	18	24	54

* - 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

Agenda

Google Search

International Student Demand

Enrollment

Employment Trends

College Athletics

Non-Degree Courses

Program of the Month

Summary

Summary

- In October, US Google searches for academic programs increased 0.4% year-over-year.
- In Spring 2022, Data Science had the fastest year-over-year enrollment growth at the bachelor's and master's level.
- General and Operations Managers had the highest growth in job postings, adding 114k postings over last year.
- In Division I college sports, men's baseball grew by over 1,000 participants in the three years leading up to Covid.
 - Men's basketball had the highest growth in expenses per participant.
- Demand for Human Computer Interaction programs at the bachelor's level is high.
 - Online completions and international student demand are in the 97th percentile and above.
 - Wages for graduates of this program are very high.
 - There are signs that the market for this program is not saturated.
- There may be opportunity to start this program in states with lower enrollment per capita.
 - The Midwest and Northeast could have room in their markets.

Upcoming Webinars

Topic	Date
Demand Trends Webcast: Community Colleges	<i>Wednesday</i> December 21 st at 2 pm ET
Demand Trends Webcast: Bachelor's and Above	<i>Tuesday</i> December 20 th at 2 pm ET

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