



Credential Design Lab: Tech Education

September 2nd, 2020

Professional & Adult
Education Forum

Meet Our PAE Forum Expert Team



Max Milder
Director



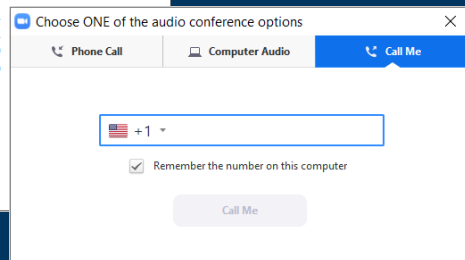
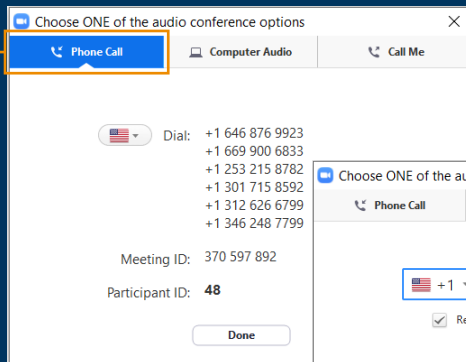
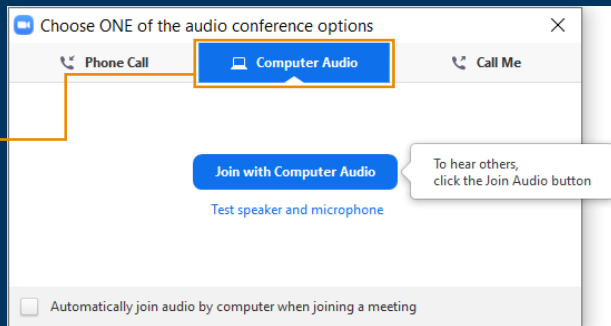
Lauren Edmonds
Director



Brynna Morgan
Analyst

Audio

- We suggest using your computer's audio and microphone through Zoom
- Or dial in using your phone
- Do not use both—it will cause feedback



Audio Mute/Unmute and Video Stop/Start

The screenshot displays a Zoom meeting window. At the top, the EAB logo is visible. The main content area shows the text "EAB Virtual Session" on a blue background with a geometric pattern. A large, semi-transparent black control bar is overlaid on the bottom half of the screen. This bar contains four icons: a microphone with a red slash, an up arrow, a video camera with a red slash, and another up arrow. Below these icons are the labels "Unmute" and "Start Video". A callout box on the left points to the microphone icon, stating: "Red slashes mean your microphone is muted and your camera is off". A callout box on the right points to the up arrow next to the video icon, stating: "Access audio and video options by clicking the up arrow next to the Mic and Camera icon". At the bottom of the Zoom window, a smaller toolbar contains icons for Mute, Stop Video, Invite, Participants (with a count of 3), Share, Chat, Record, and a red "Leave Meeting" button. The EAB logo is also present in the bottom right corner of the meeting window.

EAB

EAB Virtual Session

Unmute Start Video

Mute Stop Video Invite Participants 3 Share Chat Record Leave Meeting

EAB

Red slashes mean your microphone is muted and your camera is off

Access audio and video options by clicking the up arrow next to the Mic and Camera icon

Update Your Name

The screenshot displays a Zoom meeting window. The main content area shows a presentation slide with the EAB logo and the text "EAB Virtual Meetings 2020". On the right side, there is a "Participants (2)" panel. In this panel, "Test Participant (Me)" is listed with "Mute" and "Rename" buttons. Below it, "Meeting Host (Host)" is listed. A yellow box highlights the "Participants" icon in the bottom toolbar. An orange callout box with the text "Update your name and add your institution" points to the "Rename" button for "Test Participant (Me)". A "Rename" dialog box is open, showing the input field "Enter a new screen name:" with the text "Jane Doe - Institution" entered. The dialog has "OK" and "Cancel" buttons. The bottom toolbar includes icons for Mute, Stop Video, Invite, Participants (2), Share, Chat, Record, and a "Leave Meeting" button.

Zoom Meeting ID: 841-573-482 You are viewing Meeting Host's screen View Options

Speaker View

EAB

EAB Virtual Meetings
2020

Meeting Host

Test Participant

Participants (2)

Test Participant (Me) Mute Rename

Meeting Host (Host)

Rename

Enter a new screen name:
Jane Doe - Institution

OK Cancel

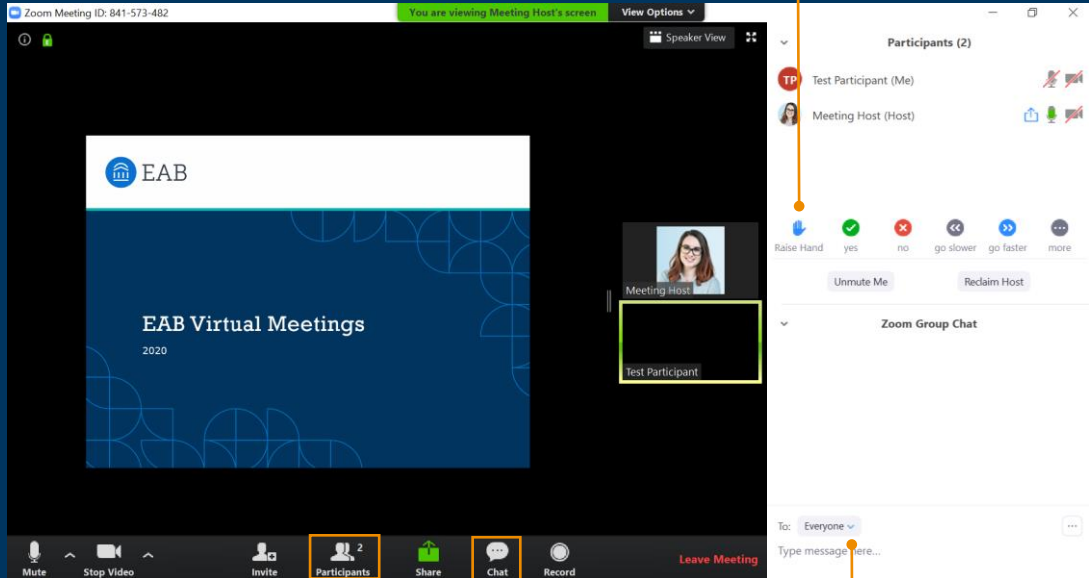
Mute Stop Video Invite Participants 2 Share Chat Record Leave Meeting

Mute Me Reclaim Host

Open Participants menu

Chat and Nonverbal Feedback

Use icons to communicate answers and signals to presenter



Open Participants and Chat

Select whether you want to chat with everyone or a specific person

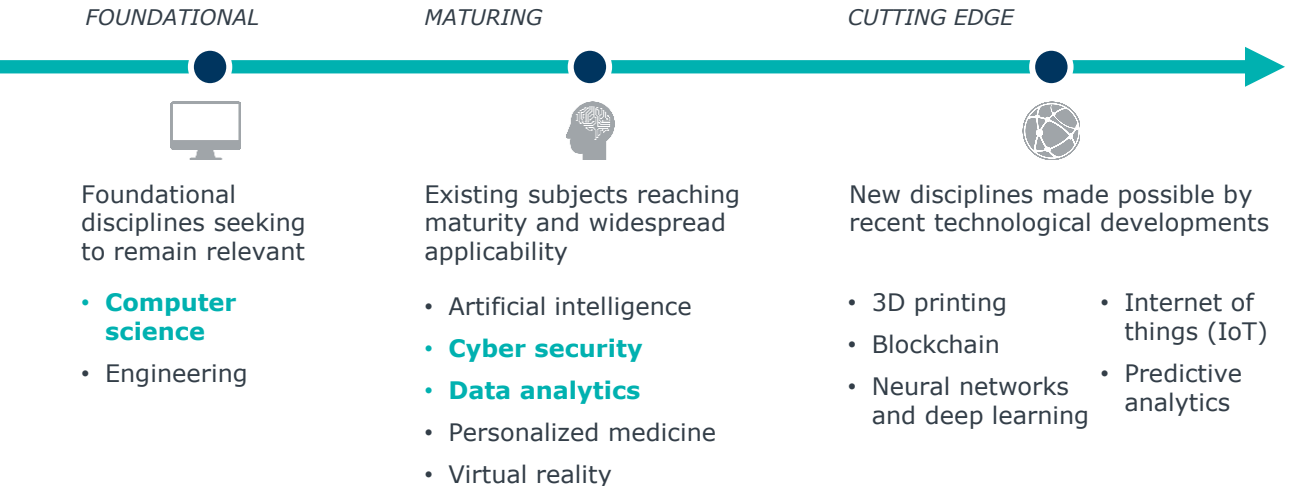
Introduction

How are you thinking about your technology portfolio strategy in the wake of the COVID-19 pandemic?

Tech Spectrum Presents Widespread Opportunity

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Major Fields' Complex Markets at Master's Level Merit More Attention



1 Cyber Security

2 Data Analytics

3 Computer Science

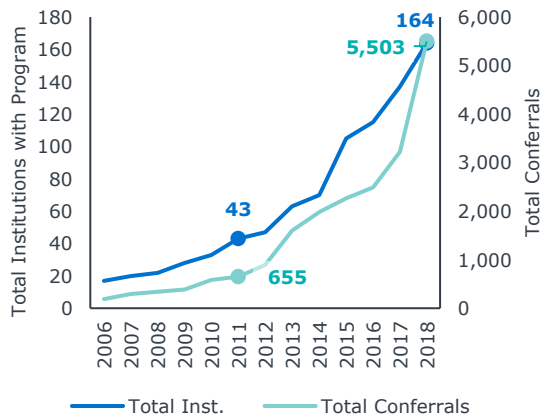
COVID-19 Amplifies Demand for Cyber Security



Consider High Levels of Competition as Student Demand Remains Strong

Conferrals Kept Pace with Number of Institutions Over Time

Number of Programs and Conferrals, 2006-18



Emphasize Both Foundational and Specialized Skills for Wide Application

Top Skills for Cyber Security Professionals, Aug 2019-Jul 2020

Skill	Percentage of Postings with Skill
Computer Science	24%
Vulnerability	21%
Auditing	18%
Linux	15%
Information Systems	15%

-1.6% Average decline in demand for cyber security skills over last 12 months

Slower decline than the -2.9% average decline in demand for all professionals

Student Demand Concentrated at Few Institutions

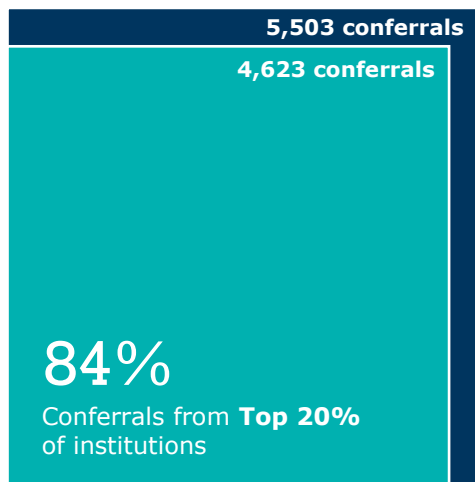


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Program Snapshot

MS in Cyber Security	2018 Overview
Total U.S. programs	164
Total conferrals	5,503
Median conferrals per program	7
Conferrals in largest program	1,175 (UMGC)
Overall growth from 2013-2018	+3,899 conferrals (28% annual growth)
Top 20% of Market Share in 2018	84% of all degrees

Market Concentration, 2018



Low Median Conferrals Reflect Limited Growth Potential Outside of Top 20%

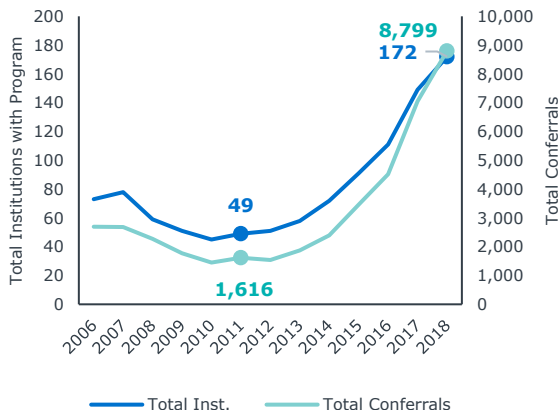
7 Median conferrals per program, 2018

Student Interest Despite COVID-Related Skills Decline

Address Large Student Interest by Emphasizing Specialized Skills

Conferrals and Number of Institutions Continues to Grow

Number of Programs and Conferrals, 2006-18



Applications of Data Analytics Skills Outweigh Specific Analytical Abilities

Top Skills for Data Analytics Professionals, August 2019-July 2020

Skill	Percentage of Postings with Skill
Digital Marketing	25%
User Experience	22%
Google Analytics	20%
Search Engine Optimization	19%
SQL	18%

-4.0% Average decline in demand for analytics skills over last 12 months

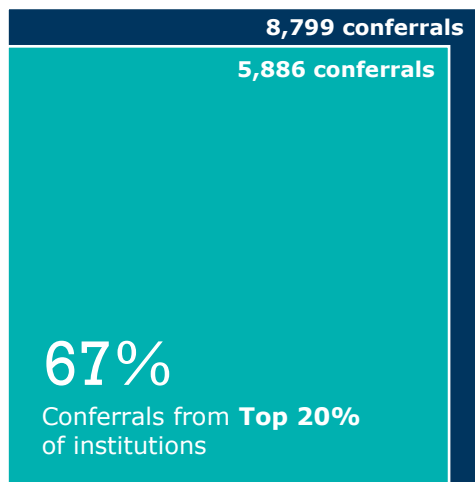
Faster decline than the -2.9% average decline in demand for all professionals

High Growth Allows for Individual Program Success

Program Snapshot

MS in Data Analytics	2018 Overview
Total U.S. programs	172
Total conferrals	8,799
Median conferrals per program	28
Conferrals in largest program	642 (UT Dallas)
Overall growth from 2013-2018	+6,936 conferrals (37% annual growth)
Top 20% of Market Share in 2018	67% of all degrees

Market Concentration, 2018



High Median Conferrals Reflect Possible Growth Potential Outside of Top 20%

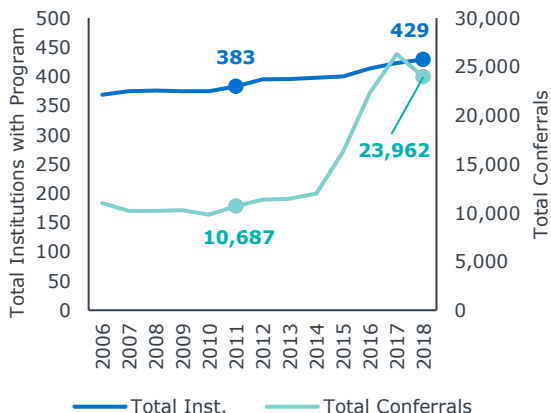
28 Median conferrals per program, 2018

Moderate Demand Despite High Student Interest

Ensure Foundational Program Teaches Updated and In-Demand Skills

Conferrals Experience Increased Growth with Limited Program Growth

Number of Programs and Conferrals, 2006-18



Offer Options to Learn Multiple Programming Languages for Different Applications

Top Skills for Computer Science Professionals, Aug 2019-Jul 2020

Skill	Percentage of Postings with Skill
Software Engineering	27%
Python	23%
Agile Software Development	23%
SQL	22%
Java	22%

-2.8% Average decline in demand for computer science skills over last 12 months

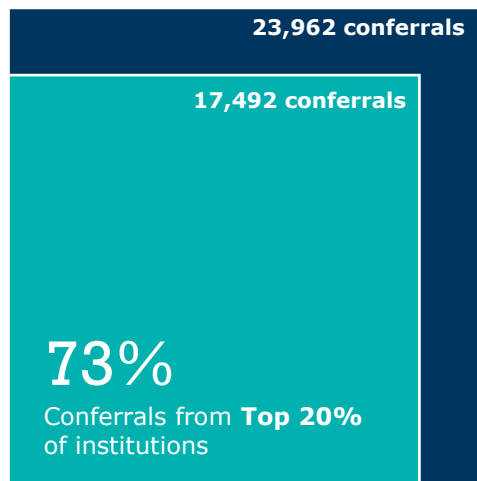
Slower decline than the -2.9% average decline in demand for all professionals

Foundational Program Still Offers Success

Program Snapshot

MS Computer Sci.	2018 Overview
Total U.S. programs	429
Total conferrals	23,962
Median conferrals per program	20
Conferrals in largest program	1,084 (Georgia Tech)
Overall growth from 2013-2018	+12,499 conferrals (16% annual growth)
Top 20% of Market Share in 2018	73% of all degrees

Market Concentration, 2018



Relatively High Median Conferrals Show There's Still Room for Mid-Tier Competition

20 Median conferrals per program, 2018

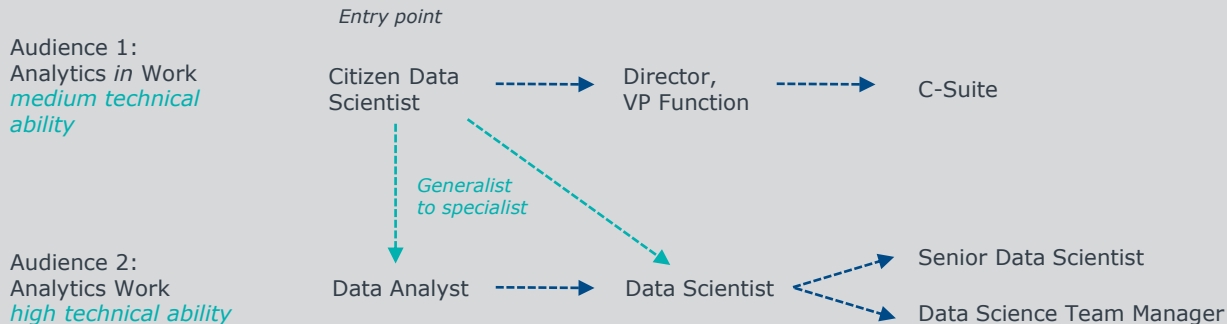
Topic Hype Oversimplifies Target Audience



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Data Analytics Alone Reveals Multi-Layer Prospective Student Pool

Analytics Career Lattice Reveals Multiple Potential Segments



III-Designed Programs Serve Students Poorly



Highly technical course developed by expert faculty appeals to inexperienced professionals

- Students lack foundation to keep up



Introductory program focuses on implementation decisions but title attracts intended practitioners

- Students fail to learn applied skills



Course promoted as latest technical evolutions teaches last year's developments

- Students recognize old information, fail to learn needed skills for today

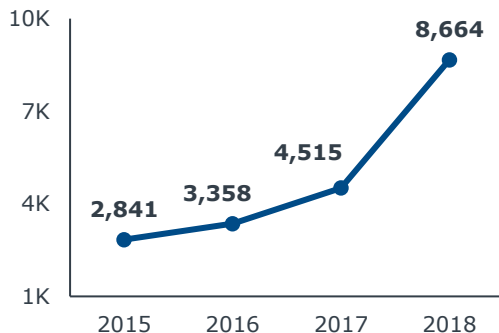
Low-Cost Offers Chance to Open New Markets



First Big Experiment in Low-Cost Master's Sees Exponential Growth



Online Master's in Computer Science Enrollments, 2015-18



\$7,000

Total cost to complete

3 yrs.

Typical time to complete¹

Not Cannibalizing Traditional Market

20%

Share of rejected Georgia Tech **Online Master's in Computer Science** applicants who ultimately enroll in any master's program

73%

Share of rejected **traditional** MS in Computer Science applicants who ultimately enroll in any master's program

2%

Share of applicants who apply to **both** the online and traditional master's at Georgia Tech

Non-Degree Avoids Competitive Master's Markets

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Design to Student Audiences Unaddressed by Master's Degree



Blockchain Business Applications Targets Decision-Makers with Low Expertise Upskilling
University of California-Los Angeles Extension

Content

- Teaches “foundation to gaining a competitive advantage in the Blockchain space”
 - Audience can have low expertise with subject
- Incorporates guest speakers to offer real-life business applications
 - Audience focused on immediate skill value

A screenshot of the course page for 'Blockchain Business Applications' (MGMT X 497.41) at the University of California - Los Angeles Extension. The page has a dark blue background with a network diagram. The title 'Blockchain Business Applications' is at the top. Below it is the course code 'MGMT X 497.41'. A paragraph describes the course as laying the foundation for gaining competitive advantage in the Blockchain space. A yellow button labeled 'View Course Options' is on the right. Below the description is a link 'READ MORE ABOUT THIS COURSE'. At the bottom, there are three columns: 'CURRENTLY OFFERED' with 'Remote Instruction', 'COST' with 'Starting at \$765.00', and 'UNITS' with '4.0'. Below the cost is 'DURATION' with 'As few as 10 weeks'.

Structure

- Single course, applies to general business studies certificates
 - **Credential in blockchain unimportant to audience** (description notes students leave with a “comprehensive understanding”)
- 10 weeks from 7-10pm
 - Audience needs convenient (i.e., after work) schedule more than fast time to completion
- Also offered online

Three Topics

We Know There's a Need for Tech Education, But How to Deliver?

Objective: With your group, create the outline for a short-format technology credential that you would aim to launch *before January 2021*. Consider market saturation, competition, in addition to employer and student demand when developing your credential. You'll have 20 minutes in your group to flesh out the program and consider the implementation challenges.

1

Data Analytics

2

Cyber Security

3

Computer Science

What to Consider

Program Characteristics

- Title
- Format/Structure
- Length
- Delivery
- Price (and who pays it)
- Topics covered
- Expertise needed

Implementation Challenges

- Hiring instructors
- Registration
- Payment
- Marketing

Hearing from Your Colleagues

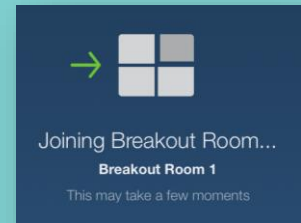
Moving to Break-Outs

Momentarily, we will move into breakout rooms

You will see a message that looks like this



Your screen will flicker for a moment and then you will be in a different “virtual” room with an EABer and just a handful of other attendees.



Consider While We Move to Break-outs:

Program Characteristics

- Title
- Price (and who pays it)
- Format/Structure
- Topics covered
- Length
- Expertise needed
- Delivery

Implementation Challenges

- Hiring instructors
- Registration
- Payment
- Marketing

Quick Poll

Where are you most likely to focus your own
technology program development in the next
12-18 months?