Applying Data and Machine Learning to Scale Education

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Chief Computing Officer of Calico Labs
Who are online learners?

- 25M learners globally
- 75% from outside U.S.
- 20-45 Age of majority of learners
- 50%+ Seek career advancement
What is the content?

150
partner universities and companies like Google, Intel, and IBM

2,000
Courses

180
Specializations

38+
Topics including computer science, business, data science, psychology, photography
How do we connect learners to the courses and skills they need to succeed?

Understand our learners + Understand our content
WE BRING

Data Science to the art of teaching
How we understand our learners
Implicit

- country
- economic classification
- registration OS
- registration URL
- referring website

Explicit

Great! Let’s find what’s right for you.

Pick up to 3 areas you’re interested in.

Select what you want to learn

- Python Programming
- Algorithms
- Java Programming
- Cloud Computing
- Android Software Development
- Agile Software Development
- Computer Programming
- Web Development
- SQL
- Cybersecurity
- IOS App Development
- JavaScript
- Internet of Things
- Database
- User Experience
- Scala Programming
Recommendations for you.

We combed our catalog and found courses and Specializations that we think match your interests. Browse our recommendations below, and start learning something new today!

- Photography Basics and Beyond: From Smartphone to DSLR
  Michigan State University | 5 Course Specialization
  Create photographs you will be proud to share.

- Networks Illustrated: Principles without Calculus
  Princeton University
  Starts Feb 20, 2017

- Bitcoin and Cryptocurrency Technologies
  Princeton University
  Starts Feb 20, 2017
How we understand our content
Autocomplete model

# of lexical occurrences in

- course title
- course video transcripts
- module descriptions
- assessments
You searched for p-value. 225 matches

Active filters: [English]

Courses and Specializations

**Value Chain Management**
- 7-course Specialization
  - University of Illinois at Urbana-Champaign

**Data Science**
- 10-course Specialization
  - Johns Hopkins University

**Valuing Projects and Companies**
- University of Michigan

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You searched for p-value. 344 matches

Active filters: [English]

Courses and Specializations

**Improving your statistical inferences**
- Eindhoven University of Technology

**Data Science**
- 10-course Specialization
  - Johns Hopkins University

**Statistical Inference**
- Johns Hopkins University
Does it work?
Courser learner outcomes survey as featured in the Harvard Business Review

87% of career builders attribute career benefit to completing online courses

33% reported a tangible career benefit such as receiving a promotion, new job, or pay increase or starting their own business.

- 19% Changed to a new career
- 62% Better equipped for current job
- 43% Improved candidacy for new job
- 26% Found a new job
- 9% Started a business
- 3% Received a raise
- 3% Received a promotion

Tangible benefits

* Indicates statistically significant outcomes.
Projected skills gap in 2020

- 40 million job vacancies requiring college-educated workers
- 90 million unemployed or underemployed medium and low-skill workers

Source: McKinsey Global Institute, 2012