“Housekeeping”

- Welcome to today’s ACM Webinar. The presentation starts at the top of the hour.

- If you are experiencing any problems/issues, refresh your console by pressing the F5 key on your keyboard in **Windows**, **Command + R** if on a **Mac**, or refresh your browser if you’re on a mobile device; or close and re-launch the presentation. You can also view the Webcast Help Guide, by clicking on the “Help” widget in the bottom dock.

- To control volume, adjust the master volume on your computer.

- If you think of a question during the presentation, please type it into the **Q&A** box and click on the submit button. You do not need to wait until the end of the presentation to begin submitting questions.

- At the end of the presentation, you’ll see a **survey URL** on the final slide. Please take a minute to click on the link and fill it out to help us improve your next webinar experience.

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- This presentation is being recorded and will be available for on-demand viewing in the next 1-2 days. You will receive an **automatic e-mail notification** when the recording is ready.
The MOOC revolution: Status and next steps

Andrew Ng
Stanford University & Coursera
• 1,400+ trusted technical books and videos by leading publishers including O’Reilly, Morgan Kaufmann, others

• Online courses with assessments and certification-track mentoring, member discounts on tuition at partner institutions

• Learning Webinars on big topics (Cloud/Mobile Development, Cybersecurity, Big Data, Recommender Systems, SaaS, Agile, Machine Learning, Natural Language Processing, Parallel Programming, etc.)

• ACM Tech Packs on top current computing topics: Annotated Bibliographies compiled by subject experts

• Popular video tutorials/keynotes from ACM Digital Library, A.M. Turing Centenary talks/panels

• Podcasts with industry leaders/award winners
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Talk Back

• Use the Facebook widget in the bottom panel to share this presentation with friends and colleagues.

• Use Twitter widget to Tweet your favorite quotes from today’s presentation with hashtag #ACMWebinarMOOC.

• Submit questions and comments via Twitter to @acmeducation – we’re reading them!
Sharmeen Shehabuddin (Bangladesh)
Sharmeen Shehabuddin (Bangladesh)
400,000
Courses from Top Universities

18 of the top 25 US Universities (ARWU rankings)

49 top universities from 20 countries

9 teacher development partners
Poll

Have you signed up for a MOOC before?
• Yes
• No
Sustainability

Health Policy & the Affordable Care Act

Introduction to Sociology

Gamification

Video based instruction

Andrew Ng
In-video quizzes
Who discovered the theory of general relativity?

Albert Einstein

What is the derivative of \( \frac{\sin(x)}{x} \) w.r.t. \( x \)?

\( \frac{x \cos(x) - \sin(x)}{x^2} \)

Your submission is equivalent to:

\( \frac{x \cos(x) - \sin(x)}{x^2} \)

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<tr>
<td>9</td>
<td>Dist. per sales person</td>
<td>3</td>
<td>5</td>
<td>8</td>
</tr>
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Autograded Homeworks and Exercises

Andrew Ng
Innovative pedagogy
Share and run code in the browser

Andrew Ng
“Your World is your lab” physics class

Andrew Ng
Peer Grading

Ramaswamy Venkatachalam
Gujarat, India

Aranzazu Hurtado Ruiz
Madrid, Spain

Paul Mendoza
Manila, Philippines

Karl Ulrich
Wharton, UPenn

LaPtabel
laptop table

DuoSlim
portable device holder

Neo-WD
space-efficient workdesk
Balesh Jindal

Project based learning
Information storage

The problem summary:
How is the information stored in our brain? As in computers we use potentials, or magnetization for example to make an array of binary code (1 or 0), what is the analogous in the brain?

Steps to repeat:
- We have working memories that may change with age.
- The question is: which would be the best way to store memories? And where in the brain?

Steps to respond:
- We have working memories that may change with age.
- The question is: which would be the best way to store memories? And where in the brain?

Anonymous: 20 hours ago

I've already worked a lot on this before starting with this course (nonetheless I learned a lot of details in the course). One of the most interesting papers I found is that information is represented feature based http://www.cs.rochester.edu/users/faculty/dane/tenfjui.pdf. I've already tried around building some small information processing algorithms based on this. If you are interested we could probably talk a bit about it.
Courses in Humanities, Science, Engineering, Business, ....
Mobile applications (iOS and Android)
International Reach
Sociology 101 Student Map

Global community of learners
Poll

After the US, what is the fastest growing country (new user signups)?

• Russia
• Brazil
• India
• China
Global community of learners
Take the world's best courses, online, for free.

在网上免费学习全世界最好的课程。

学习 630 门课程。这些课程来自世界 108 所知名大学
运作方式 »
有超过80个世界最好的课程，由来自世界顶尖大学的教科书级大师亲自教授。这些课程旨在提升你的技能，帮助你实现职业发展。

### 运作方式

Andrew Ng

[图片]

Andrew Ng（吴恩达）是斯坦福大学计算机科学系的副教授，他还担任斯坦福大学人工智能实验室主任。该实验室是斯坦福大学主要的人工智能研究机构，共有15名教授以及150名学生和博士后。2008年，他与斯坦福大学专业发展中心（SCDP）创立了SEE（Stanford Engineering Everywhere），并将斯坦福大学数十个工程学科开放给大众。这也是斯坦福大学第一次尝试免费分发的教育方式，有超过一百万人观看了SEE的课程视频。在斯坦福大学，他同时领导开发了OpenClassroom 和 ml-class/db-class 在线教育平台，这就是Coursera 的前身。2011年，他在ml-class平台上讲授了机器学习课程，该课程是斯坦福大学最火的在线课程之一，共超过10万名学生参加。

除了在斯坦福大学任教外，吴恩达还在机器学习领域工作，特别致力于使用大规模的人脑模型来构建人工智能系统。他的前期工作包括无人驾驶直升机、斯坦福人工智能机器人（STAIR）项目和 ROS（目前使用最广泛的开源机器人软件平台）。吴恩达作为作者或共同作者在机器学习领域发表了超过150篇论文，他的团队获得过ICML、ACL、CEAS和3DRR等会议的最佳论文及最佳学生论文奖。他也是艾尔菲·P·斯隆奖金的获得者，还在2009年获得了人工智能领域的最高奖之一的 LCAI Computers and Thought award。

主席

Lila Ibrahim（莉拉·伊布拉欣）是Coursera 的主席，她还是Team4Tech 公司的联合创始人。
>75% have a Bachelor's degree

Most students 20 to 39 years old
Credentials
Zack Starer-Stor
(USA)
Introduction to Guitar

Grasp the essentials needed to begin playing acoustic or electric guitar. You'll learn an easy approach to get you playing quickly, through a combination of exploring the instrument, performance technique, and basic music theory.

About the Course

For students who have long thought about picking up the acoustic or electric guitar, this course will provide an easy-access foundation that will get you playing. When first learning guitar, it is important to have the material presented in stages, in an enjoyable way that allows you to grasp the basics of the instrument and music. The course begins simply with the parts of the guitar, the names of the strings, tuning, and technique—whether finger-style or pick. It then explores the basics of music theory with such topics as scales, chords, power chords, and fingering and shapes.

Sessions

Jan 27th 2014

Join for Free

Earn a Verified Certificate
Earn a Verified Certificate.

Duke University
Introduction to Genetics and Evolution
Mohamed Noor

Regular price: $96.00
Introductory price: $49.00

JOIN SIGNATURE TRACK »

Your Work, Your Identity
Link your coursework securely to your real identity using your photo ID and unique typing pattern.

Earn a Verified Certificate
Earn official recognition from Duke University and Coursera for your accomplishment with a verifiable electronic certificate.

Share Your Success
Share your course records with employers, educational institutions, or anyone else through a unique, secure URL.

Signature Track Courses
Duke University

APRIL 09, 2013

Jacob Lyles

has successfully completed with distinction

Introduction to Genetics and Evolution

an online non-credit course offered by Duke University through Coursera

Andrew Ng

Signature Track
Retention

Average retention rates
Poll

What percentage of learners intend to list their Verified Certificate on their CV/resume?

• 35%
• 62%
• 77%
• 89%
Student Motivations: Plans for verified certificate

- List on my resume/CV: 76.6%
- Show my qualifications in a new field: 66.0%
- As motivation to finish my course: 57.4%
- Advance my qualifications in my current field: 44.7%
- List on my LinkedIn profile: 42.6%
- Assist in a career change: 38.3%
- Assist in a new job search: 38.3%
- Print a paper copy: 38.3%
- Present to my employer: 19.1%
- Present to my school: 12.8%
Specializations

Data Science
Johns Hopkins University

Mobile Cloud Computing with Android
UMD & Vanderbilt

Challenges in Global Affairs
Leiden & UNIGE

Foundations of Teaching for Learning
Commonwealth Education Trust

Modern Musician
Berklee College of Music

Systems Biology
Icahn School of Medicine at Mount Sinai

Cybersecurity
University of Maryland, College Park

Andrew Ng

1. Programming Mobile Applications for Android...
2. Pattern-Oriented Software Architectures...
3. Programming Cloud Services for Android Handheld...
4. Capstone Project

Course 1
Programming Mobile Applications for Android Handheld Systems
Upcoming Session: TBA
Duration: TBA
Estimated Workload: 3-6 hours/week
Specialization Certificate

has been presented to

Jane Learner

on July 6, 2014 for successfully completing

Data Science

a non-credit series authorized by Johns Hopkins University through Coursera
Data
<table>
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<th>Learner Activity</th>
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<td>Watched a lecture</td>
<td>73,018</td>
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<tr>
<td>Submitted an exercise</td>
<td>29,067</td>
</tr>
<tr>
<td>Engaged in a discussion</td>
<td>7,113</td>
</tr>
</tbody>
</table>

Types of Activity
Count of learners by activity type over a 7-day rolling period

- Visit
- Lecture
- Quiz

Student retention
Data analytics at scale
Week of January 07

Algorithms: Design and Analysis, Part 2

What you did this week

- Logged into class :)

Upcoming Deadlines

- Completed Problem Set #1
- Completed Programming Assignment #1
- Completed Problem Set #2
- Completed Programming Assignment #2

- Problem Set #3
  - Due Date: Monday, January 07, 2013 at 08:50:00 AM (CET)
  - Hard Deadline: Monday, February 11, 2013 at 08:59:00 AM (CET)

- Programming Assignment #3
  - Due Date: Monday, January 07, 2013 at 08:50:00 AM (CET)
  - Hard Deadline: Monday, February 11, 2013 at 08:59:00 AM (CET)

Up next

- Watch WIS in Path Graphs: A Linear-Time Algorithm (10 min)

My Progress

- Videos: (30 out of 51 videos watched)
- Assessments: (4 out of 6 assessments completed)

---

Data: Learn how students learn

Andrew Ng
Summary
Creating Success at Scale

Sharmeen Shehabuddin (Bangladesh)

Balesh Jindal (New Delhi)

Zack Starer-Stor (New York)
• High-quality online content
• Produced locally or adopted from another institution.

• Peer Instruction
• Small group problem solving
• Mentoring/Coaching
Education for Everyone

North America: 35.2%
Europe: 28.2%
Asia: 21.4%
South America: 8.8%
Africa: 3.6%
Oceania: 2.8%
ACM: The Learning Continues...

• Questions about this webcast? learning@acm.org

• ACM Learning Webinars (on-demand archive): http://learning.acm.org/webinar

• ACM Learning Center: http://learning.acm.org

• ACM Learning at Scale Conference (L@S): http://learningatscale.acm.org/