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Deep Learning Specialization

Deep Learning Specialization. Master Deep Learning, and Break into AI

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Starts Apr 05

Try for Free: Enroll to start your 7-day full access free trial
Scholarships available

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About this Specialization

If you want to break into AI, this Specialization will help you do so. Deep Learning is one of the most highly sought after skills in tech. We will help you become good at Deep Learning.

In five courses, you will learn the foundations of Deep Learning, understand how to build neural networks, and learn how to lead successful machine learning projects. You will learn about Convolutional networks, RNNs, LSTM, Adam, Dropout, BatchNorm, Xavier/He initialization, and more. You will work on case studies from healthcare, autonomous driving, sign language reading, music generation, and natural language processing. You will master not only the theory, but also see how it is applied in industry. You will practice all these ideas in Python and in TensorFlow, which we will teach.

SHOW ALL

SKILLS YOU WILL GAIN

You will also hear from many top leaders in Deep Learning, who will share with you their personal stories and give you career advice.

TensorFlow   Convolutional Neural Network   Artificial Neural Network
Deep Learning

AI is transforming multiple industries. After finishing this specialization, you will likely find creative ways to apply it to your work.

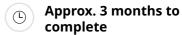We will help you master Deep Learning, understand how to apply it, and build a career in AI.

100% online courses
Start instantly and learn at your own schedule.

Flexible Schedule
Set and maintain flexible deadlines.

Intermediate Level

Approx. 3 months to complete
Suggested 11 hours/week

English
Subtitles: English, Chinese (Traditional), Arabic, French, Ukrainian, Chinese (Simplified), Portuguese (Brazilian), Kore Turkish, Japanese

1,700 companies are using Coursera to train their employees

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How the Specialization Works

Take Courses

A Coursera Specialization is a series of courses that helps you master a skill. To begin, enroll in the Specialization directly, or review its courses and choose the one you'd like to start with. When you subscribe to a course that is part of a Specialization, you're automatically subscribed to the full Specialization. It's okay to complete just one course — you can pause your learning or end your subscription at any time. Visit your learner dashboard to track your course enrollments and your progress.

Hands-on Project

Every Specialization includes a hands-on project. You'll need to successfully finish the project(s) to complete the Specialization and earn your certificate. If the Specialization includes a separate course for the hands-on project, you'll need to finish each of the other courses before you can start it.

Earn a Certificate

When you finish every course and complete the hands-on project, you'll earn a Certificate that you can share with prospective employers and your professional network.

There are 5 Courses in this Specialization

COURSE

1

Neural Networks and Deep Learning

★ ★ ★ ★ ★ **4.9**   49,523 ratings • 9,568 reviews

If you want to break into cutting-edge AI, this course will help you do so. Deep learning engineers are highly sought after, and mastering deep learning will give you numerous new career opportunities. Deep learning is also a new "superpower" that will let you build AI syst**... SHOW A**

COURSE

2

Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization

★ ★ ★ ★ ★ **4.9**   31,277 ratings • 3,402 reviews

This course will teach you the "magic" of getting deep learning to work well. Rather than the deep learning process being a black box, you will understand what drives performance, and be able to more systematically get good results. You will also learn TensorFlow. After **... SHOW AI**

COURSE

3

Structuring Machine Learning Projects

★ ★ ★ ★ ★ **4.8**   25,605 ratings • 2,777 reviews

You will learn how to build a successful machine learning project. If you aspire to be a technical leader in AI, and know how to set direction for your team's work, this course will show you how. Much of this content has never been taught elsewhere, and is drawn from my **... SHOW AL**

COURSE

4

Convolutional Neural Networks

★ ★ ★ ★ ★ **4.9**   19,840 ratings • 2,479 reviews

This course will teach you how to build convolutional neural networks and apply it to image data. Thanks to deep learning, computer vision is working far better than just two years ago, and this is enabling numerous exciting applications ranging from safe autonomous dr**... SHOW A**

Show More

Instructors

Andrew Ng

CEO/Founder Landing AI; Co-founder, Coursera; Adjunct Professor, Stanford University; formerly Chief Scientist,Baidu and founding lead of Google Brain

Head Teaching Assistant - Kian Katanforoosh

Lecturer of Computer Science at Stanford University, deeplearning.ai, Ecole CentraleSupelec

Teaching Assistant - Younes Bensouda Mourri

Mathematical & Computational Sciences, Stanford University, deeplearning.ai

Industry Partners

About deeplearning.ai

deeplearning.ai is Andrew Ng's new venture which amongst others, strives for
providing comprehensive AI education beyond borders.

Start Today with a 7-Day Free Trial

✓ Shareable Specialization and Course Certificates
✓ Self-Paced Learning Option
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✓ Practice Quizzes
✓ Graded Assignments with Peer Feedback
✓ Graded Quizzes with Feedback
✓ Graded Programming Assignments

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Shareable on **Linked** **in**

Deep Learning

You can share your Course Certificates in the Certifications section of your LinkedIn profile, on printed resumes, CVs, or other documents.

Frequently Asked Questions

> What is the refund policy?

If you subscribed, you get a 7-day free trial during which you can cancel at no penalty. After that, we don't give refunds, but you can cancel your subscription at any time. <u>See our full refund policy</u>.

> Can I just enroll in a single course?

Yes! To get started, click the course card that interests you and enroll. You can enroll and complete the course to earn a shareable certificate, or you can audit it to view the course materials for free. When you subscribe to a course that is part of a Specialization, you're automatically subscribed to the full Specialization. Visit your learner dashboard to track your progress.

> Is financial assistance available?

Yes, Coursera provides scholarships to learners who cannot afford the fee. Apply for it by clicking on the Scholarships link next to the "Enroll" button. You'll be prompted to complete an application and will be notified if you are approved. You'll need to complete this step for each course in the Specialization, including the Capstone Project. <u>Learn more</u>.

> Can I take the course for free?

When you enroll in the course, you get access to all of the courses in the Specialization, and you earn a certificate when you complete the work. If you only want to read and view the course content, you can audit the course for free. If you cannot afford the fee, <u>you can apply for financial aid</u>.

> Is this course really 100% online? Do I need to attend any classes in person?

This course is completely online, so there's no need to show up to a classroom in person. You can access your lectures, readings and assignments anytime and anywhere via the web or your mobile device.

> Will I earn university credit for completing the Specialization?

This Specialization doesn't carry university credit, but some universities may choose to accept Specialization Certificates for credit. Check with your institution to learn more.

> What background knowledge is necessary?

Expected:

Programming experience: The course is taught in Python. We assume you have basic programming skills (understanding of for loops, if/else statements, data structures such as lists and dictionaries).

> The courses have sessions starting now. Do I have to take them all at once?

No, these courses have sessions that start every few weeks. Once you enroll in a Specialization, you can take the courses at your own pace and even switch sessions if you fall behind. Please visit the Learner Help Center if you have any more questions about enrollment and sessions: https://learner.coursera.help/hc/en-us/articles/209818613.

Recommended:

> How do I get a receipt to get this course reimbursed by my employer?

Mathematics: basic linear algebra (matrix vector operations and notation) will help.

To request a receipt: in your Coursera account, open your My Purchases page. Find the course or Specialization you want a receipt for, and click "Email Receipt." The receipt will be sent within 24 hours. More instructions on requesting a receipt are here: https://learner.coursera.help/hc/en-us/articles/208280230.

> Machine learning (for example, what is a supervised learning task, what does a machine learning model do) will help. If you have taken Andrew Ng's Machine Learning course on Coursera, you're good of course.

> I want to purchase this Specialization for my employees! How can I do that?

Please go to https://www.coursera.org/enterprise for more information, to contact Coursera, and to pick a plan. For each plan, you decide the number of courses each person can take and hand-pick the collection of courses they can choose from.

More questions? Visit the Learner Help Center.

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