



3 Courses

**Build Basic Generative  
Adversarial Networks  
(GANs)**

**Build Better Generative  
Adversarial Networks  
(GANs)**

**Apply Generative  
Adversarial Networks  
(GANs)**



Sep 4, 2022

## Mohammad Reza Shafie

has successfully completed the online, non-credit Specialization

# Generative Adversarial Networks (GANs)

Congratulations! You have completed all 3 courses of Generative Adversarial Networks - a DeepLearning.AI Specialization. As part of this Specialization, you have learned the classical machine learning skills and the state-of-the-art deep learning techniques needed to build GANs models. You are now equipped to design applications that perform image generation and image-to-image translation using GANs! These, and other generative applications, are going to be at the forefront of the coming transformation to an AI-powered future.



Sharon Zhou  
Course Instructor  
DeepLearning.AI

The online specialization named in this certificate may draw on material from courses taught on-campus, but the included courses are not equivalent to on-campus courses. Participation in this online specialization does not constitute enrollment at this university. This certificate does not confer a University grade, course credit or degree, and it does not verify the identity of the learner.

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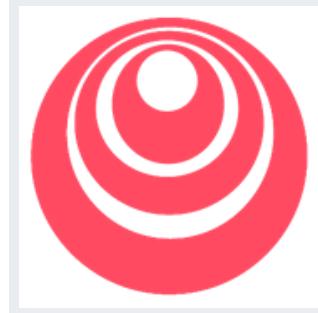


3 Courses

Supervised Machine Learning: Regression and Classification

Advanced Learning Algorithms

Unsupervised Learning, Recommenders, Reinforcement Learning



Sep 17, 2022

## Mohammad Reza Shafie

has successfully completed the online, non-credit Specialization

# Machine Learning

Congratulations on completing all three courses of the Machine Learning Specialization! You studied modern machine learning concepts, including supervised learning (linear regression, logistic regression, neural networks, decision trees), unsupervised learning (clustering, anomaly detection), recommender systems, and reinforcement learning. You learned some of the best practices for building machine learning models. You've also gained practical skills to apply machine learning techniques to challenging real-world problems. Now #BreakIntoAI and start building your career in machine learning!

A handwritten signature in blue ink that reads "Andrew Ng".

Andrew Ng, Instructor,  
DeepLearning.AI  
Eddy Shyu, Curriculum  
Architect,  
DeepLearning.AI  
Aarti Bagul and Geoff  
Ladwig, Curriculum  
Engineers,  
DeepLearning.AI

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Aug 18, 2022

## Mohammad Reza Shafie

has successfully completed

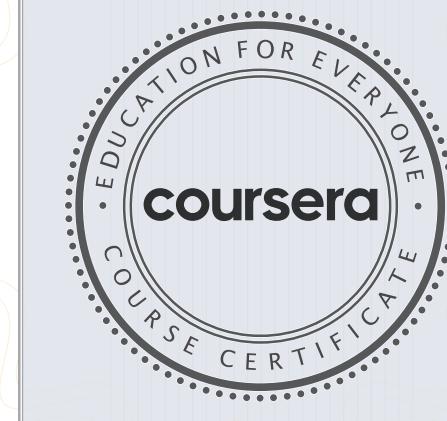
### Applied Machine Learning in Python

an online non-credit course authorized by University of Michigan and offered through Coursera

A handwritten signature in black ink that reads "Kevyn Collins-Thompson".

Kevyn Collins-Thompson  
Associate Professor  
School of Information

### COURSE CERTIFICATE



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<https://coursera.org/verify/TVHK7S3L8EP8>

Coursera has confirmed the identity of this individual and their participation in the course.

UC SANTA CRUZ

Aug 19, 2022

# Mohammad Reza Shafie

has successfully completed

## C for Everyone: Programming Fundamentals

an online non-credit course authorized by University of California, Santa Cruz and offered through Coursera

Ira Pohl

Professor Ira Pohl, PhD  
Baskin School of Engineering  
University of California, Santa Cruz

## COURSE CERTIFICATE



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Aug 24, 2022

## Mohammad Reza Shafie

has successfully completed

### Convolutional Neural Networks

an online non-credit course authorized by DeepLearning.AI and offered through Coursera

A handwritten signature in blue ink that reads "Andrew Ng".

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Andrew Ng, Founder, DeepLearning.AI & Co-founder, Coursera  
Kian Katanforoosh, Co-founder, Workera  
Younes Bensouda Mourri, Instructor of AI, Stanford University

### COURSE CERTIFICATE



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Aug 17, 2022

## Mohammad Reza Shafie

has successfully completed

### Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization

an online non-credit course authorized by DeepLearning.AI and offered through Coursera

A handwritten signature in blue ink that appears to read "Andrew Ng".

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Andrew Ng, Founder, DeepLearning.AI & Co-founder, Coursera  
Kian Katanforoosh, Co-founder, Workera  
Younes Bensouda Mourri, Instructor of AI, Stanford University

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Aug 15, 2022

## Mohammad Reza Shafie

has successfully completed

### Neural Networks and Deep Learning

an online non-credit course authorized by DeepLearning.AI and offered through Coursera

A handwritten signature in blue ink that appears to read "Andrew Ng".

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Andrew Ng, Founder, DeepLearning.AI & Co-founder, Coursera  
Kian Katanforoosh, Co-founder, Workera  
Younes Bensouda Mourri, Instructor of AI, Stanford University

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Aug 22, 2022

## Mohammad Reza Shafie

has successfully completed

### Structuring Machine Learning Projects

an online non-credit course authorized by DeepLearning.AI and offered through Coursera

A handwritten signature in blue ink that appears to read "Andrew Ng".

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Andrew Ng, Founder, DeepLearning.AI & Co-founder, Coursera  
Kian Katanforoosh, Co-founder, Workera  
Younes Bensouda Mourri, Instructor of AI, Stanford University

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# Deep Learning Specialization

ISSUED TO

Mohammad Shafie



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