



Sep 28, 2021

SS Nitin Hariharan

has successfully completed

Machine Learning with Python

an online non-credit course authorized by IBM and offered through Coursera

Saeed Aghabozorgi
Sr. Data Scientist
IBM

Joseph Santarcangelo
Senior Data Scientist
IBM

**COURSE
CERTIFICATE**



Verify at:
<https://coursera.org/verify/ET8HDRH9TBU6>

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



Oct 15, 2021

SS Nitin Hariharan

has successfully completed

**Introduction to Deep Learning & Neural Networks
with Keras**

an online non-credit course authorized by IBM and offered through Coursera

A handwritten signature in black ink, appearing to read "Alex Akson", written over a horizontal dotted line.

Alex Akson, Ph.D.
Data Scientist

**COURSE
CERTIFICATE**



Verify at:

<https://coursera.org/verify/A93ER2YNATQC>

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



Oct 19, 2021

SS Nitin Hariharan

has successfully completed with honors

Deep Neural Networks with PyTorch

an online non-credit course authorized by IBM and offered through Coursera

A handwritten signature in black ink, reading "J. Santarcangelo".

Joseph Santarcangelo
Senior Data Scientist
IBM

**COURSE
CERTIFICATE**

WITH HONORS



Verify at:
<https://coursera.org/verify/LWCY9W9LFNVB>

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



Oct 23, 2021

SS Nitin Hariharan

has successfully completed

Building Deep Learning Models with TensorFlow

an online non-credit course authorized by IBM and offered through Coursera

Three handwritten signatures in black ink, positioned above a dotted line.

Alex Akison
Romeo Kienzler
Samaya Madhavan

**COURSE
CERTIFICATE**



Verify at:
<https://coursera.org/verify/U5RBXFCX4G48>

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



Oct 21, 2021

SS Nitin Hariharan

has successfully completed

AI Capstone Project with Deep Learning

an online non-credit course authorized by IBM and offered through Coursera

A handwritten signature in black ink, appearing to read "Alex Akson", written over a horizontal dotted line.

Alex Akson, Ph.D.
Data Scientist

A handwritten signature in black ink, appearing to read "Joseph Santarcangelo", written over a horizontal dotted line.

Joseph Santarcangelo
Senior Data Scientist
IBM

**COURSE
CERTIFICATE**



Verify at:

<https://coursera.org/verify/R3888HAUX4AR>

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



5 Courses

Neural Networks and Deep Learning

Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization

Structuring Machine Learning Projects

Convolutional Neural Networks

Sequence Models



Apr 5, 2022

SS Nitin Hariharan

has successfully completed the online, non-credit Specialization

Deep Learning

Congratulations! You have completed all 5 courses of the Deep Learning Specialization. In this Specialization, you built neural network architectures such as Convolutional Neural Networks, Recurrent Neural Networks, LSTMs, Transformers, and learned how to make them better with strategies such as Dropout, BatchNorm, and Xavier/He initialization. You mastered these theoretical concepts, learned their industry applications using Python and TensorFlow, and tackled real-world cases such as speech recognition, music synthesis, chatbots, machine translation, natural language processing, and more. You are now familiar with the capabilities and challenges of deep learning. You are ready to take the definitive step in the world of AI and participate in the development of leading-edge technology.

Andrew Ng,
Founder,
DeepLearning.AI

Kian Katanforoosh
Co-founder, Workera

Younes Bensouda
Mourri
Instructor of AI,
Stanford University

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.

Verify this certificate at:
<https://coursera.org/verify/specialization/MTUJ9X89YXJ2>



4 Courses

**Introduction to TensorFlow
for Artificial Intelligence,
Machine Learning, and Deep
Learning**

**Convolutional Neural
Networks in TensorFlow**

**Natural Language
Processing in TensorFlow**

**Sequences, Time Series and
Prediction**



Nov 30, 2021

SS Nitin Hariharan

has successfully completed the online, non-credit Professional
Certificate

DeepLearning.AI TensorFlow Developer

Congratulations! You have completed all 4 courses of the DeepLearning.AI TensorFlow Developer Professional Certificate program. As part of this Professional Certificate program, you have learned: how to build and train neural networks using TensorFlow, how to improve network performance using convolutions as you train it to identify real-world images, how to teach machines to understand, analyze, and respond to human speech with natural language processing systems, and more! These, and other TensorFlow concepts, are going to be at the forefront of the coming transformation to an AI-powered future.

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.

Laurence Moroney
Lead AI Advocate
Google

Andrew Ng
Founder
DeepLearning.AI

Verify this certificate at:

[https://coursera.org/verify/profession
al-cert/T8HYBP3JYCSK](https://coursera.org/verify/professional-al-cert/T8HYBP3JYCSK)



Stanford | ONLINE

Jul 20, 2022

SS Nitin Hariharan

has successfully completed

Supervised Machine Learning: Regression and Classification

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

A blue ink signature of Andrew Ng.

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

**COURSE
CERTIFICATE**



Verify at:
<https://coursera.org/verify/ZVJBYZGZYW9R>

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



Stanford | ONLINE

Jan 27, 2023

SS Nitin Hariharan

has successfully completed

Advanced Learning Algorithms

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

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

**COURSE
CERTIFICATE**



Verify at:
<https://coursera.org/verify/XJB7T6293ZVL>

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