



5 Courses

Introduction to Data
Science in Python

Applied Plotting, Charting &
Data Representation in
Python

Applied Machine Learning in
Python

Applied Text Mining in
Python

Applied Social Network
Analysis in Python



Aug 16, 2021

Palash Prashant Thakur

has successfully completed the online, non-credit Specialization

Applied Data Science with Python

The 5 courses in this University of Michigan specialization introduce learners to data science through the python programming language. This skills-based specialization is intended for learners who have a basic python or programming background, and want to apply statistical, machine learning, information visualization, and text analysis techniques to gain new insight into their data. In the final course, students will work on real-world data analysis projects, building a portfolio which showcases their work while at the same time helping real clients gain a better understanding of their data.

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.

Christopher Brooks
Research Assistant
Professor
School of Information

Daniel Romero, Ph.D.
Assistant Professor
School of Information
University of Michigan

Kevyn Collins-
Thompson
Associate Professor
School of Information

V. G. Vinod Vydiswaran
Assistant Professor
School of Information

Verify this certificate at:
coursera.org/verify/specialization/X7ADHLWNDYKF



4 Courses

**Custom Models, Layers, and
Loss Functions with
TensorFlow**

**Custom and Distributed
Training with TensorFlow**

**Advanced Computer Vision
with TensorFlow**

**Generative Deep Learning
with TensorFlow**



13 Apr, 2021

Palash Prashant Thakur

has successfully completed the online, non-credit Specialization

TensorFlow: Advanced Techniques

Congratulations! You have completed all four courses of the TensorFlow: Advanced Techniques Specialization! With this Specialization, you've expanded your knowledge of the Functional API and are ready to build exotic non-sequential model types. You learned how to optimize training in different environments with multiple processors and chip types and have also been introduced to advanced computer vision scenarios such as object detection, image segmentation, and interpreting convolutions. You've explored generative deep learning including the ways AIs can create new content from Style Transfer to Auto Encoding, VAEs, and GANs. You are now equipped to build complex, custom models using TensorFlow.



Laurence Moroney
Lead AI Advocate
Google

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Verify this certificate at:
coursera.org/verify/specialization/JVMRM3R7U2GA



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**



27 Mar, 2020

Palash Prashant Thakur

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:
[coursera.org/verify/professional-
cert/KTFCFXSRMAUV](https://coursera.org/verify/professional-cert/KTFCFXSRMAUV)

This certificate is computer generated and can be verified by scanning the QR code given below. This will display the certificate from the NPTEL repository, <https://nptel.ac.in/noc/>

Roll No: NPTEL20CS88S72020255

To
PALASH PRASHANT THAKUR
MODI NUMBER 2 KAMPTEE
RAM MANDIR ROAD, KAMPTEE
KAMPTEE
MAHARASHTRA - 441001
PH. NO :8788061875



Score	Type of Certificate
≥ 90	Elite+Gold
75-89	Elite+Silver
≥ 60	Elite
40-59	Successfully Completed
< 40	No Certificate

No. of credits recommended by NPTEL:3

An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.



NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to
PALASH PRASHANT THAKUR
for successfully completing the course

Deep Learning for Computer Vision

with a consolidated score of **57** %

Online Assignments	19.49/25	Proctored Exam	37.5/75
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Total number of candidates certified in this course: 132

Prof. B Umashankar

Chairperson, Centre for Continued Education (CCE)
IIT Hyderabad

Sep-Dec 2020
(12 week course)

Prof. Andrew Thangaraj
NPTEL Coordinator
IIT Madras



भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad



Roll No: NPTEL20CS88S72020255

To validate and check scores: <https://nptel.ac.in/noc>

This certificate is computer generated and can be verified by scanning the QR code given below. This will display the certificate from the NPTEL repository, <https://nptel.ac.in/noc/>

Roll No: NPTEL21CS09S12030197

To
PALASH THAKUR
MODI NUMBER 2 KAMPTEE
RAM MANDIR ROAD, KAMPTEE
KAMPTEE
MAHARASHTRA - 441001
PH. NO : 8788061875



Score	Type of Certificate
≥ 90	Elite+Gold
75-89	Elite+Silver
≥ 60	Elite
40-59	Successfully Completed
< 40	No Certificate

No. of credits recommended by NPTEL: 2

An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.



Elite

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to

PALASH THAKUR

for successfully completing the course



Embedded System Design with ARM

with a consolidated score of **77** %

Online Assignments	21.17/25	Proctored Exam	55.5/75
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Total number of candidates certified in this course: **183**

Prof. G P Raja Sekhar
Dean, Continuing Education
IIT Kharagpur

Jan-Mar 2021
(8 week course)

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur



Indian Institute of Technology Kharagpur



Roll No: NPTEL21CS09S12030197

To validate and check scores: <https://nptel.ac.in/noc/>

VERIFIED

CERTIFICATE *of* ACHIEVEMENT



This is to certify that

Palash Prashant Thakur

successfully completed and received a passing grade in

**6.431x: Probability - The Science of
Uncertainty and Data**

a course of study offered by MITx, an online learning initiative of the Massachusetts
Institute of Technology.

A handwritten signature in black ink, appearing to read "John Tsitsiklis".

John Tsitsiklis

Professor, Department of Electrical Engineering and
Computer Science

Massachusetts Institute of Technology

A handwritten signature in black ink, appearing to read "Krishna Rajagopal".

Krishna Rajagopal

Dean for Digital Learning

Massachusetts Institute of Technology



VERIFIED CERTIFICATE
Issued December 25, 2020

VALID CERTIFICATE ID
[6a2c99104fe8443ebacb07d298be3ff1](#)