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Roll No: NPTEL21CS11S21060001

To  
PAVAN KUMAR SINGH  
55F/2, MUNDERAGRAM  
DHUMANGANJ  
ALLAHABAD  
UTTAR PRADESH - 211011  
PH. NO :9956750546



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

**PAVAN KUMAR SINGH**

for successfully completing the course



## Introduction to Soft Computing

with a consolidated score of **76** %

Online Assignments	24.13/25	Proctored Exam	51.38/75
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Total number of candidates certified in this course: **166**

**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



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Roll No: NPTEL21GE07S13070147  
To  
PAVAN KUMAR SINGH  
55F/2, MUNDERAGRAM  
DHUMANGANJ  
ALLAHABAD  
UTTAR PRADESH - 211011  
PH. NO :9956750546

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  
**PAVAN KUMAR SINGH**  
for successfully completing the course



## Fuzzy Logic and Neural Networks

with a consolidated score of **90** %

Online Assignments	22.5/25	Proctored Exam	67.5/75
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Total number of candidates certified in this course: **84**

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

Feb-Apr 2021  
(8 week course)

Prof. Debjani Chakraborty  
Coordinator, NPTEL  
IIT Kharagpur



Indian Institute of Technology Kharagpur



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: NPTEL21EE103S33070045

To  
PAVAN KUMAR SINGH  
55F/2, MUNDERAGRAM  
DHUMANGANJ  
ALLAHABAD  
UTTAR PRADESH - 211011  
PH. NO :9956750546



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

**PAVAN KUMAR SINGH**

for successfully completing the course

**Power Quality**

with a consolidated score of **50** %

Online Assignments	20.31/25	Proctored Exam	30/75
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Total number of candidates certified in this course: **12**

*Devendra Jalihal*

**Prof. Devendra Jalihal**  
Chairman  
Centre for Continuing Education, IITM

Jul-Oct 2021  
(12 week course)

*Prof. Andrew Thangaraj*

**Prof. Andrew Thangaraj**  
NPTEL, Coordinator  
IIT Madras



Indian Institute of Technology Madras



Roll No:NPTEL21EE103S33070045

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

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Roll No: NPTEL21CS70S43070134

To  
PAVAN KUMAR SINGH  
55F/2, MUNDERAGRAM  
DHUMANGANJ  
ALLAHABAD  
UTTAR PRADESH - 211011  
PH. NO :9956750546



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.



Elite

# NPTEL Online Certification

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



This certificate is awarded to

**PAVAN KUMAR SINGH**

for successfully completing the course

## Introduction to Machine Learning

with a consolidated score of **69** %

Online Assignments	22.19/25	Proctored Exam	46.5/75
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Total number of candidates certified in this course: **800**

*Devendra Jalihal*

**Prof. Devendra Jalihal**  
Chairman  
Centre for Continuing Education, IITM

Jul-Oct 2021  
(12 week course)

*Prof. Andrew Thangaraj*

**Prof. Andrew Thangaraj**  
NPTEL, Coordinator  
IIT Madras



Indian Institute of Technology Madras



Roll No:NPTEL21CS70S43070134

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.

Roll No: NPTEL22CS11S13060101

To  
PAVAN KUMAR SINGH  
55F/2, MUNDERAGRAM  
DHUMANGANJ  
ALLAHABAD  
UTTAR PRADESH - 211011  
PH. NO :9956750546



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 MoE, Govt. of India)



This certificate is awarded to

**PAVAN KUMAR SINGH**

for successfully completing the course



**Data Mining**

with a consolidated score of **75** %

Online Assignments	23.75/25	Proctored Exam	51.26/75
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Total number of candidates certified in this course: **709**

**Prof. Jayanta Mukhopadhyay**  
Dean Outreach  
IIT Kharagpur

Feb-Apr 2022  
(8 week course)

**Prof. Debjani Chakraborty**  
Coordinator, NPTEL  
IIT Kharagpur



Indian Institute of Technology Kharagpur



This certificate is computer generated and can be verified by scanning the QR code given below.

Roll No: NPTEL22CS56S33060149

To  
PAVAN KUMAR SINGH  
55F/2, MUNDERAGRAM  
DHUMANGANJ  
ALLAHABAD  
UTTAR PRADESH - 211011  
PH. NO :9956750546



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 MoE, Govt. of India)



This certificate is awarded to

**PAVAN KUMAR SINGH**

for successfully completing the course

## An Introduction to Artificial Intelligence

with a consolidated score of **47** %

Online Assignments	16.5/25	Proctored Exam	30/75
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Total number of candidates certified in this course: **59**

*Devendra Jalihal*

**Prof. Devendra Jalihal**  
Chairman  
Centre for Continuing Education, IITM

Jan-Apr 2022  
(12 week course)

*Prof. Andrew Thangaraj*

**Prof. Andrew Thangaraj**  
NPTEL, Coordinator  
IIT Madras



Indian Institute of Technology Madras

