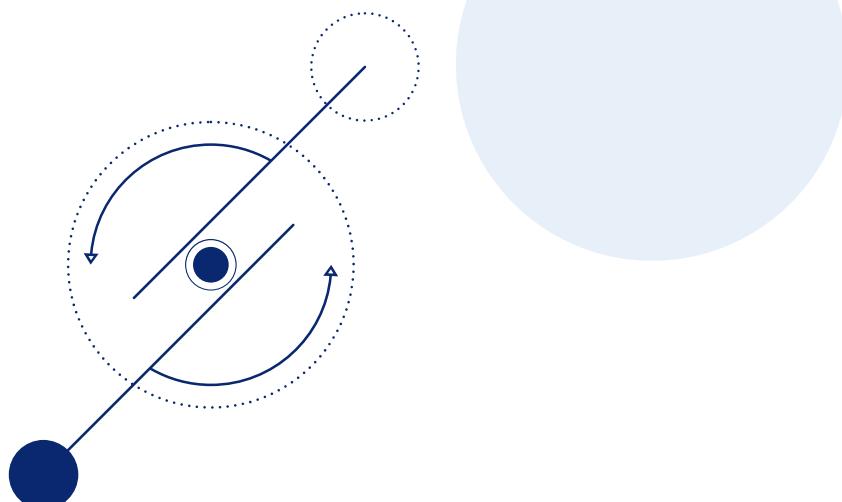
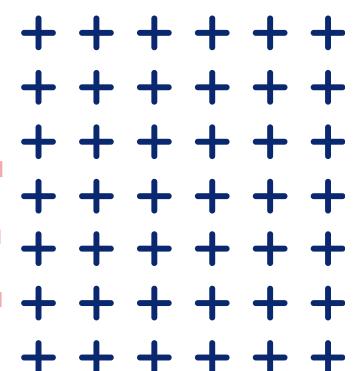




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DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE



MONTHLY NEWS LETTER

NOV' 25



NEWS

EDITORIAL COMMITTEE MEMBERS



Dr. M. Kaliappan, Professor & Head



Dr. E. Mariappan, Associate Professor



K. Nithya Shree, IV - B



I. Delight Cherubino, III - A

VISION

- TO IMPART INTERNATIONAL QUALITY EDUCATION, PROMOTE COLLABORATIVE RESEARCH AND GRADUATE INDUSTRY-READY ENGINEERS IN THE DOMAIN OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE TO SERVE THE SOCIETY.

MISSION

- EXCEL IN TEACHING-LEARNING PROCESS AND COLLABORATIVE RESEARCH BY THE USE OF MODERN INFRASTRUCTURE AND INNOVATIVE COMPONENTS.
- ESTABLISH AN ARTIFICIAL INTELLIGENCE AND DATA SCIENCE BASED CENTRE OF EXCELLENCE TO PREPARE PROFESSIONAL TECHNOCRATS FOR SOLVING INTERDISCIPLINARY INDUSTRY PROBLEMS IN VARIOUS APPLICATIONS
- MOTIVATE STUDENTS TO EMERGE AS ENTREPRENEURS WITH LEADERSHIP QUALITIES IN A SOCIETAL CENTRIC PROGRAMME TO FULFIL INDUSTRY AND COMMUNITY NEEDS WITH ETHICAL STANDARDS.

PROGRAM EDUCATIONAL OBJECTIVES (PEO'S)

AFTER SUCCESSFUL COMPLETION OF THE DEGREE, THE STUDENTS WILL BE ABLE TO

- PEO 1. APPLY ARTIFICIAL INTELLIGENCE AND DATA SCIENCE TECHNIQUES WITH INDUSTRIAL STANDARDS AND PIONEERING RESEARCH TO SOLVE SOCIAL AND ENVIRONMENT-RELATED PROBLEMS FOR MAKING A SUSTAINABLE ECOSYSTEMS.
- PEO 2. EXCEL WITH PROFESSIONAL SKILLS, FUNDAMENTAL KNOWLEDGE, AND ADVANCED FUTURISTIC TECHNOLOGIES TO BECOME DATA SCIENTISTS, DATA ANALYST MANAGERS, DATA SCIENCE LEADERS AI RESEARCH SCIENTISTS, OR ENTREPRENEURS.

PROGRAM SPECIFIC OUTCOMES (PSO'S)

AFTER SUCCESSFUL COMPLETION OF THE DEGREE, THE STUDENTS WILL BE ABLE TO:

- PSO 1: TO APPLY ANALYTIC TECHNOLOGIES TO ARRIVE AT ACTIONABLE FORESIGHT, INSIGHT, HINDSIGHT FROM DATA FOR SOLVING BUSINESS AND ENGINEERING PROBLEMS
- PSO 2: TO CREATE, AND APPLY THE TECHNIQUES OF AI AND DATA SCIENCE TO FORECAST FUTURE EVENTS IN THE DOMAIN OF HEALTHCARE, EDUCATION, AND AGRICULTURE, MANUFACTURING, AUTOMATION, ROBOTICS, TRANSPORT, ETC
- PSO 3: TO ENRICH THE CRITICAL THINKING SKILLS IN EMERGING TECHNOLOGIES SUCH AS HYBRID MOBILE APPLICATION DEVELOPMENT, CLOUD TECHNOLOGY STACK, AND CYBER-PHYSICAL SYSTEMS WITH MATHEMATICAL AID TO FORESEE THE RESEARCH FINDINGS AND PROVIDE THE SOLUTIONS.

FACULTY PARTICIPATION

>> DR. M. KALIAPPAN, PROFESSOR AND HEAD/ AI & DS, HAS SUCCESSFULLY PARTICIPATED & COMPLETED AICTE TRAINING AND LEARNING (ATAL) ACADEMY FACULTY DEVELOPMENT PROGRAM ON "NEXT GEN AI AND LLMS: TRANSFORMING PEDAGOGY AND RESEARCH" AT NATIONAL INSTITUTE OF TECHNICAL TEACHERS' TRAINING AND RESEARCH FROM 10TH TO 15TH NOV., 2025.



>> DR. E.MARIAPPAN, ASSO.PROF/ AI & DS, HAS SUCCESSFULLY PARTICIPATED & COMPLETED AICTE TRAINING AND LEARNING (ATAL) ACADEMY FACULTY DEVELOPMENT PROGRAM ON "NEXT GEN AI AND LLMS: TRANSFORMING PEDAGOGY AND RESEARCH" AT NATIONAL INSTITUTE OF TECHNICAL TEACHERS' TRAINING AND RESEARCH FROM 10TH TO 15TH NOV., 2025.



>> MRS. R. ANGEL HEPZIBAH, AP / AI & DS, HAS SUCCESSFULLY PARTICIPATED & COMPLETED AICTE TRAINING AND LEARNING (ATAL) ACADEMY FACULTY DEVELOPMENT PROGRAM ON "NEXT GEN AI AND LLMS: TRANSFORMING PEDAGOGY AND RESEARCH" AT NATIONAL INSTITUTE OF TECHNICAL TEACHERS' TRAINING AND RESEARCH FROM 10TH TO 15TH NOV., 2025.



>> MRS. B. REVATHI, AP /AI&DS, AWARDED 12 WEEKS ONLINE CERTIFICATION COURSE ON "OPERATING SYSTEM FUNDAMENTALS" OFFERED BY SWAYAM-NPTEL, ON JUL-OCT 2025.



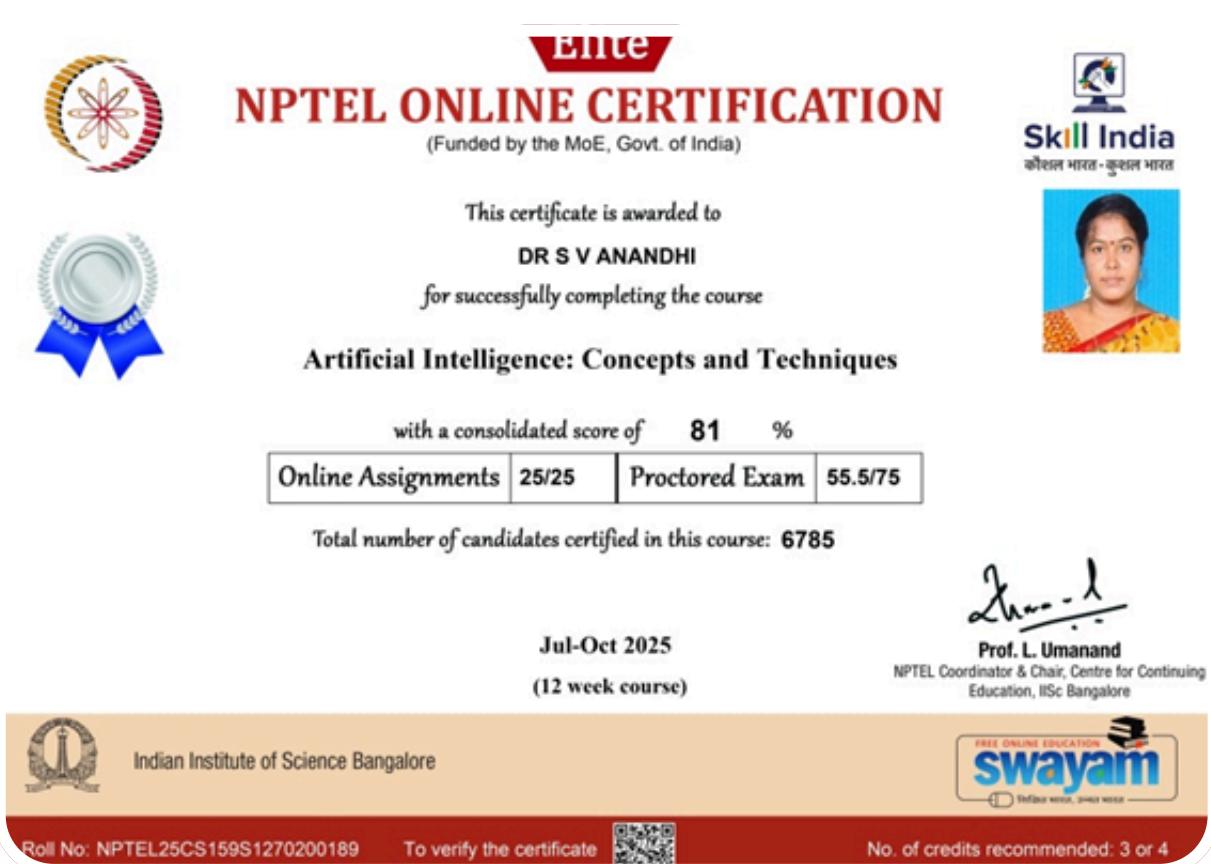
>> MR. M. RAMNATH, AP / AI & DS, HAS SUCCESSFULLY PARTICIPATED IN THE NATIONAL CONFERENCE ON "UNNAT BHARAT ABHIYAN: ADVANCING COMMUNITY ENGAGEMENT IN HIGHER EDUCATION TOWARDS SDGS 2030 AND VIKSIT BHARAT @ 2047" HELD ON 11.11.2025 AT THE GANDHIGRAM RURAL INSTITUTE (DEEMED TO BE UNIVERSITY), GANDHIGRAM, DINDIGUL DISTRICT, TAMILNADU.



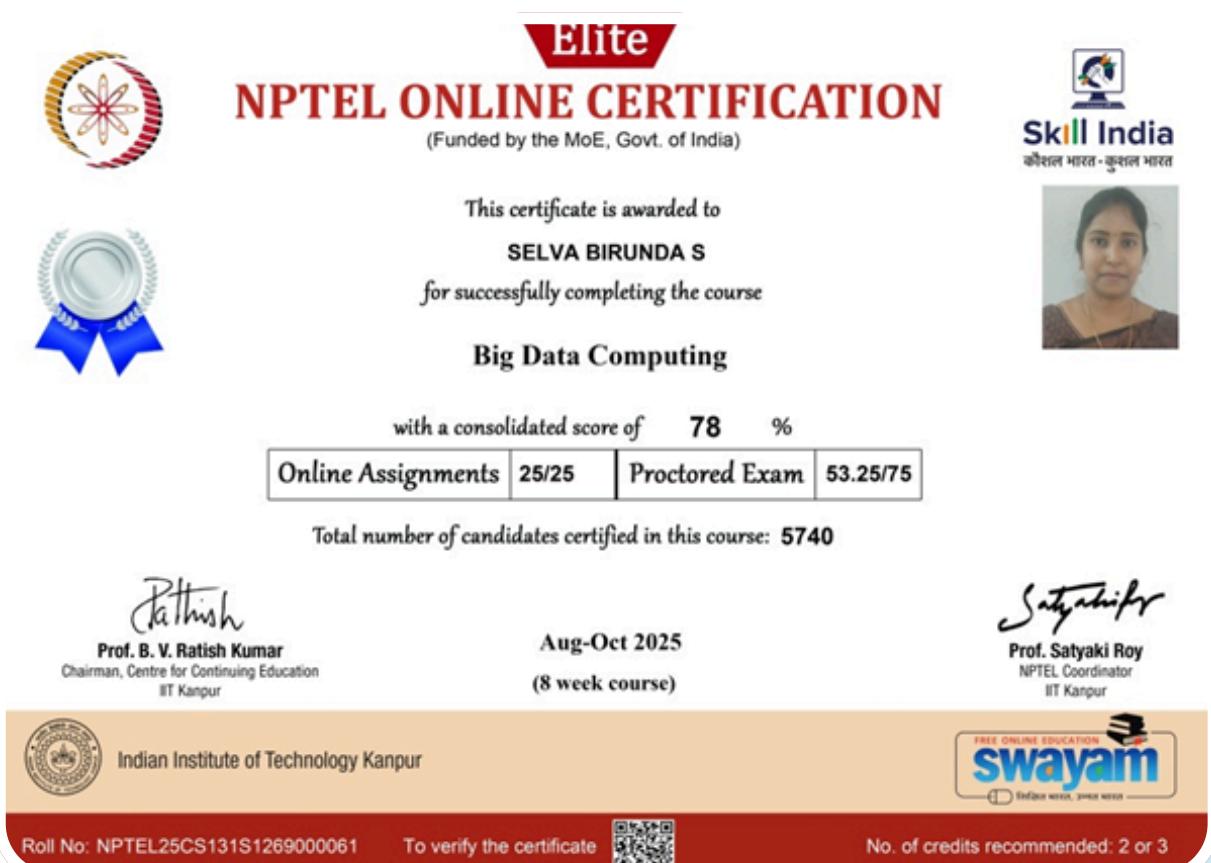
>> MR. M. RAMNATH, AP / AI & DS, PARTICIPATED & COMPLETED AICTE TRAINING AND LEARNING (ATAL) ACADEMY FACULTY DEVELOPMENT PROGRAM ON "NEXT GEN AI AND LLMS: TRANSFORMING PEDAGOGY AND RESEARCH" AT NATIONAL INSTITUTE OF TECHNICAL TEACHERS' TRAINING AND RESEARCH FROM 10TH TO 15TH NOV., 2025.



>> DR. S. V. ANANDHI, ASSO.PROF/AI&DS, AWARDED 12 WEEKS ONLINE CERTIFICATION COURSE ON "ARTIFICIAL INTELLIGENCE: CONCEPTS AND TECHNIQUES" OFFERED BY SWAYAM-NPTEL, ON JUL-OCT 2025.



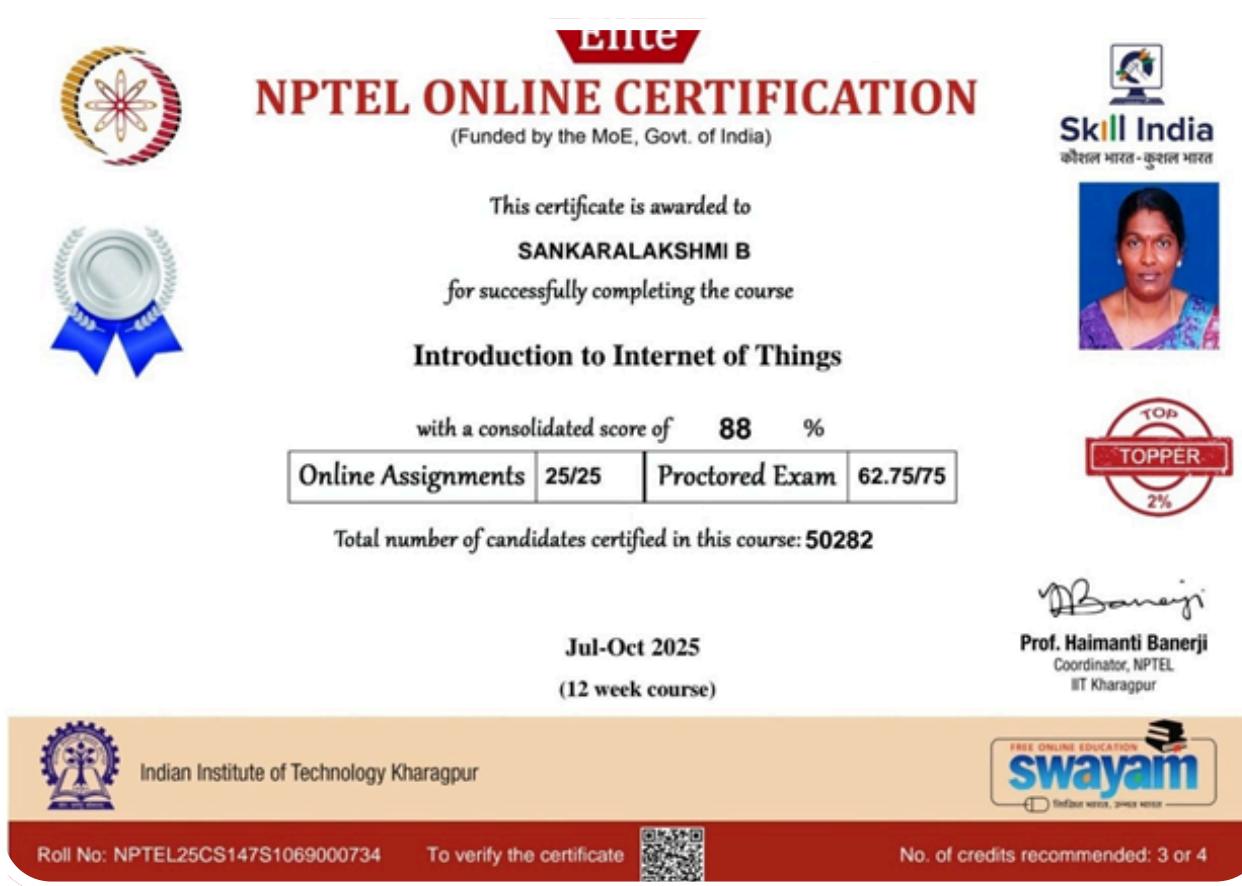
>> DR. S. SELVA BIRUNDA, ASSO.PROF/AI&DS, AWARDED 8 WEEKS ONLINE CERTIFICATION COURSE ON "BIG DATA COMPUTING" OFFERED BY SWAYAM-NPTEL, ON AUG-OCT 2025.



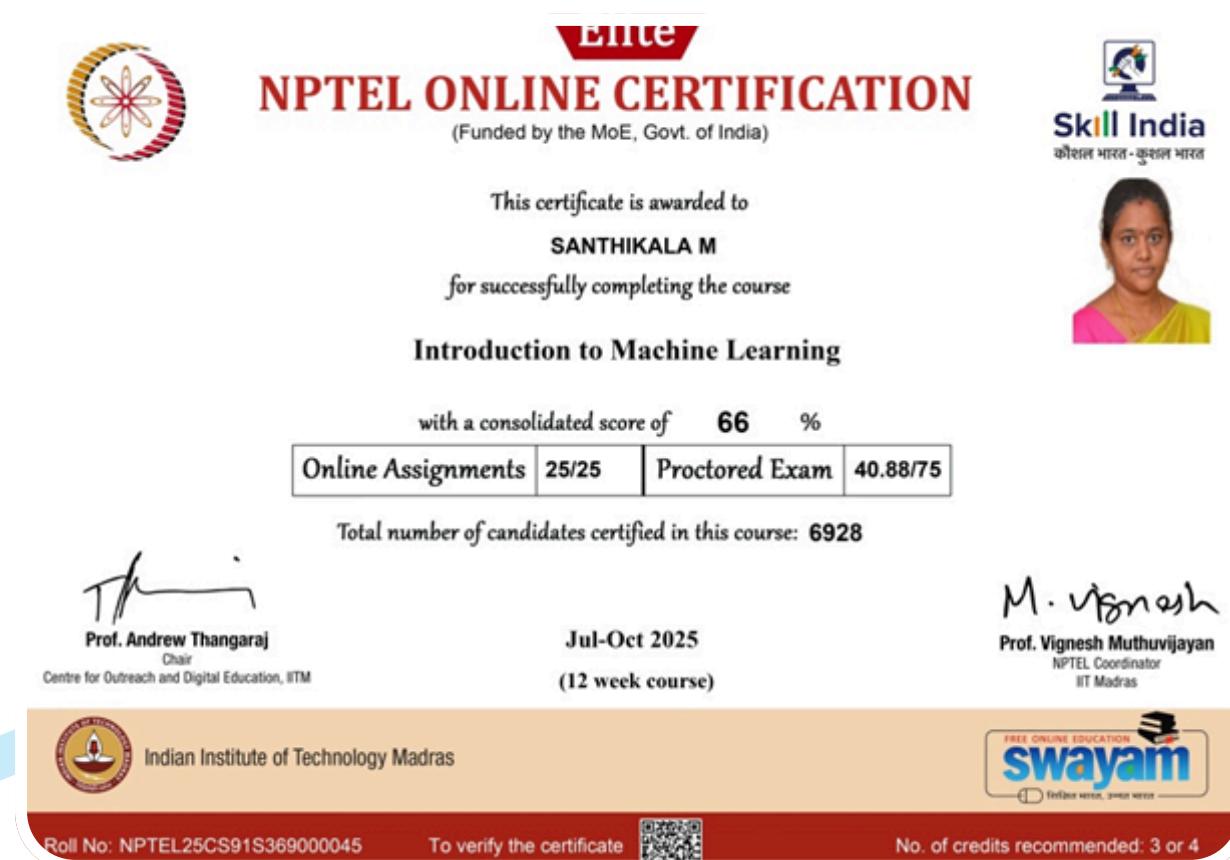
>> MRS. B. SANKARALAKSHMI, AP/AI&DS, AWARDED 12 WEEKS ONLINE CERTIFICATION COURSE ON "ARTIFICIAL INTELLIGENCE: CONCEPTS AND TECHNIQUES" OFFERED BY SWAYAM-NPTEL, ON JUL-OCT 2025.



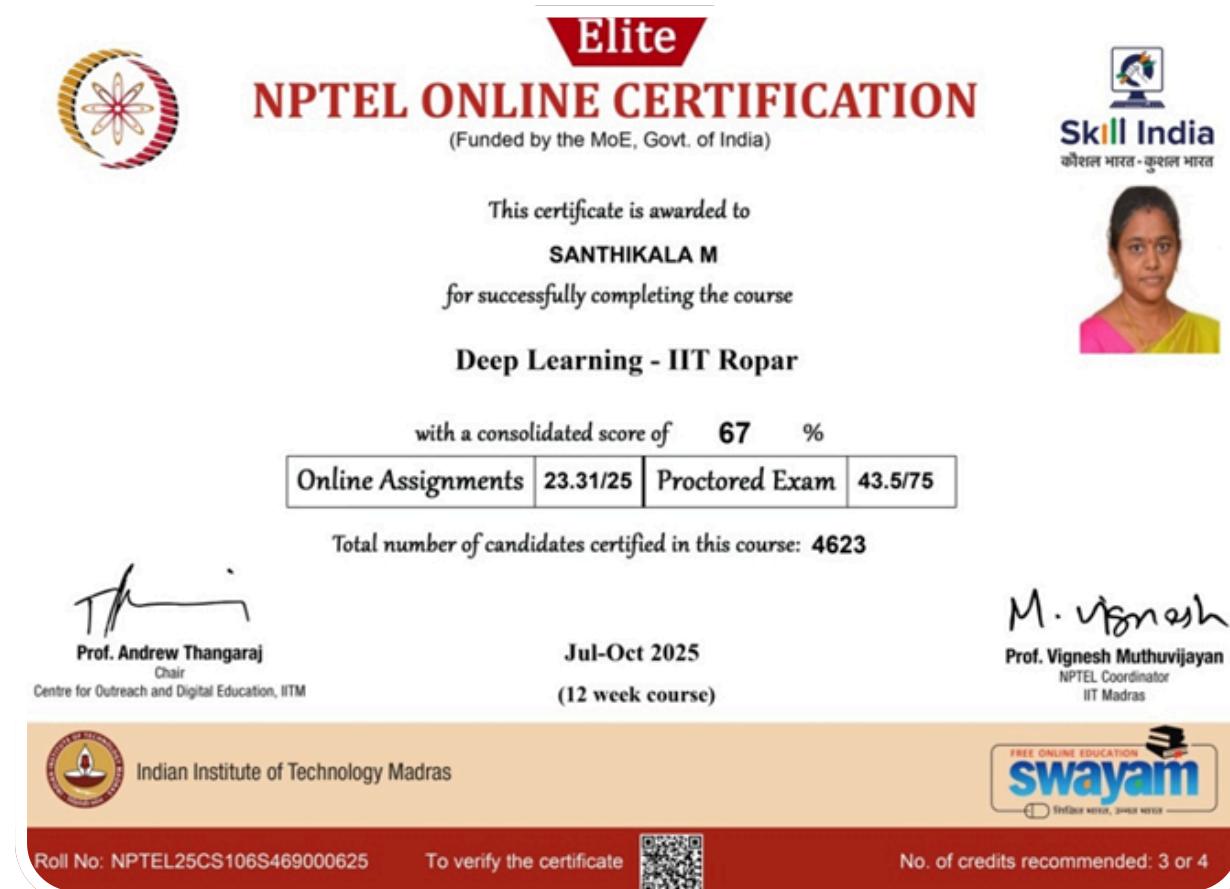
>> MRS. B. SANKARALAKSHMI, AP/AI&DS, AWARDED 12 WEEKS ONLINE CERTIFICATION COURSE ON "INTRODUCTION TO INTERNET OF THINGS" OFFERED BY SWAYAM-NPTEL, ON JUL-OCT 2025.



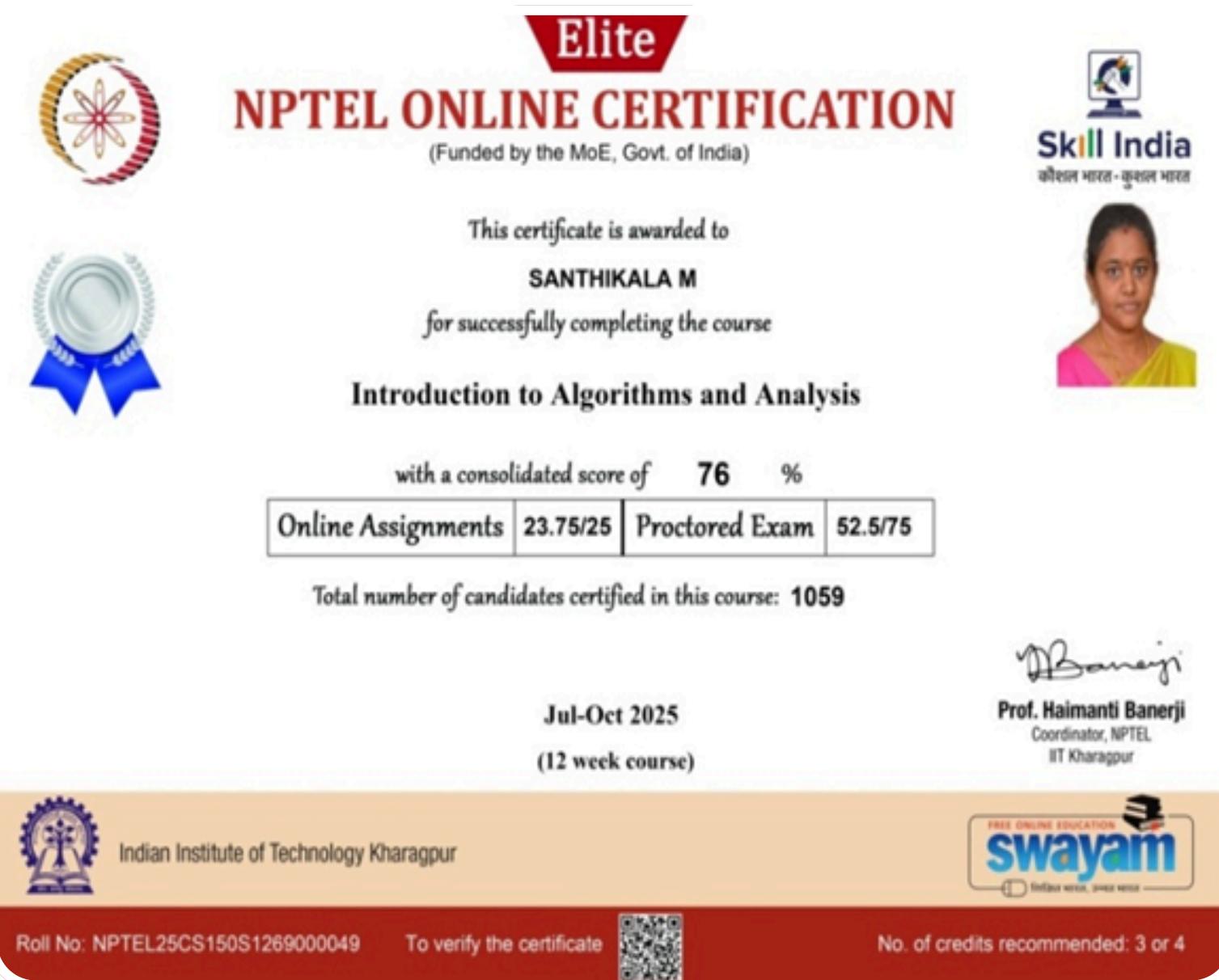
>> MRS. M.SANTHIKALA, AP /AI&DS, AWARDED 12 WEEKS ONLINE CERTIFICATION COURSE ON "INTRODUCTION TO MACHINE LEARNING" OFFERED BY SWAYAM-NPTEL, ON JUL-OCT 2025.



>> MRS. M.SANTHIKALA, AP /AI&DS, AWARDED 12 WEEKS ONLINE CERTIFICATION COURSE ON "DEEP LEARNING – IIT REPAR" OFFERED BY SWAYAM-NPTEL, ON JUL-OCT 2025.



>> MRS. M.SANTHIKALA, AP /AI&DS, AWARDED 12 WEEKS ONLINE CERTIFICATION COURSE ON "INTRODUCTION TO ALGORITHMS AND ANALYSIS" OFFERED BY SWAYAM-NPTEL, ON JUL-OCT 2025.

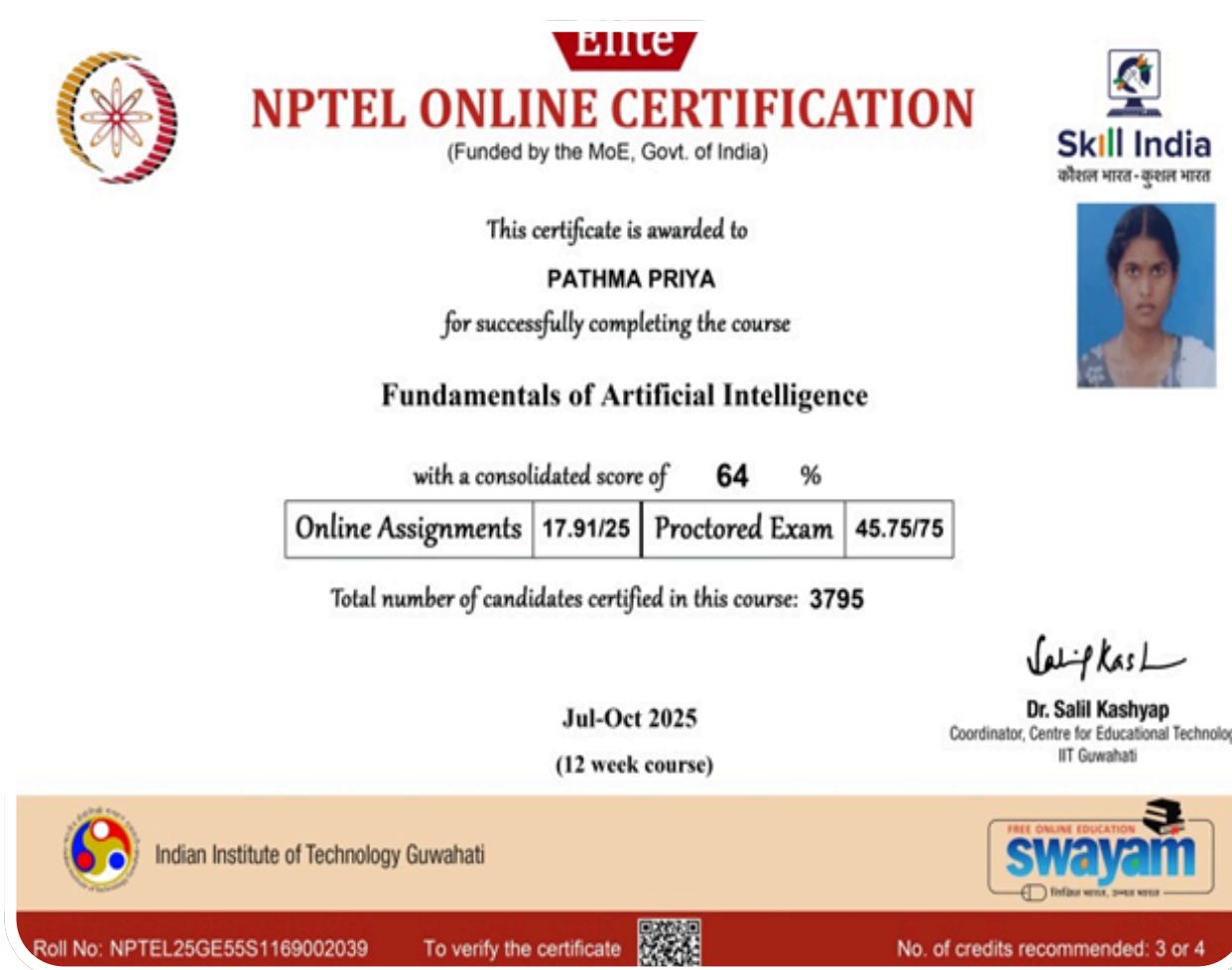


STUDENTS PARTICIPATION

>> K. MAHIMA, II-AI&DS-A, HAS SUCCESSFULLY PARTICIPATED AN EVENT WITH ACTIVITY AND HANDS-ON PROJECT-BASED WORKSHOP, "A PRECURSOR AND A QUALIFIER TO THE RESIDENTIAL STUDENT WORKSHOP", CONDUCTED AT THE MEPCO SCHLENK ENGINEERING COLLEGE ON 25TH OCTOBER 2025.



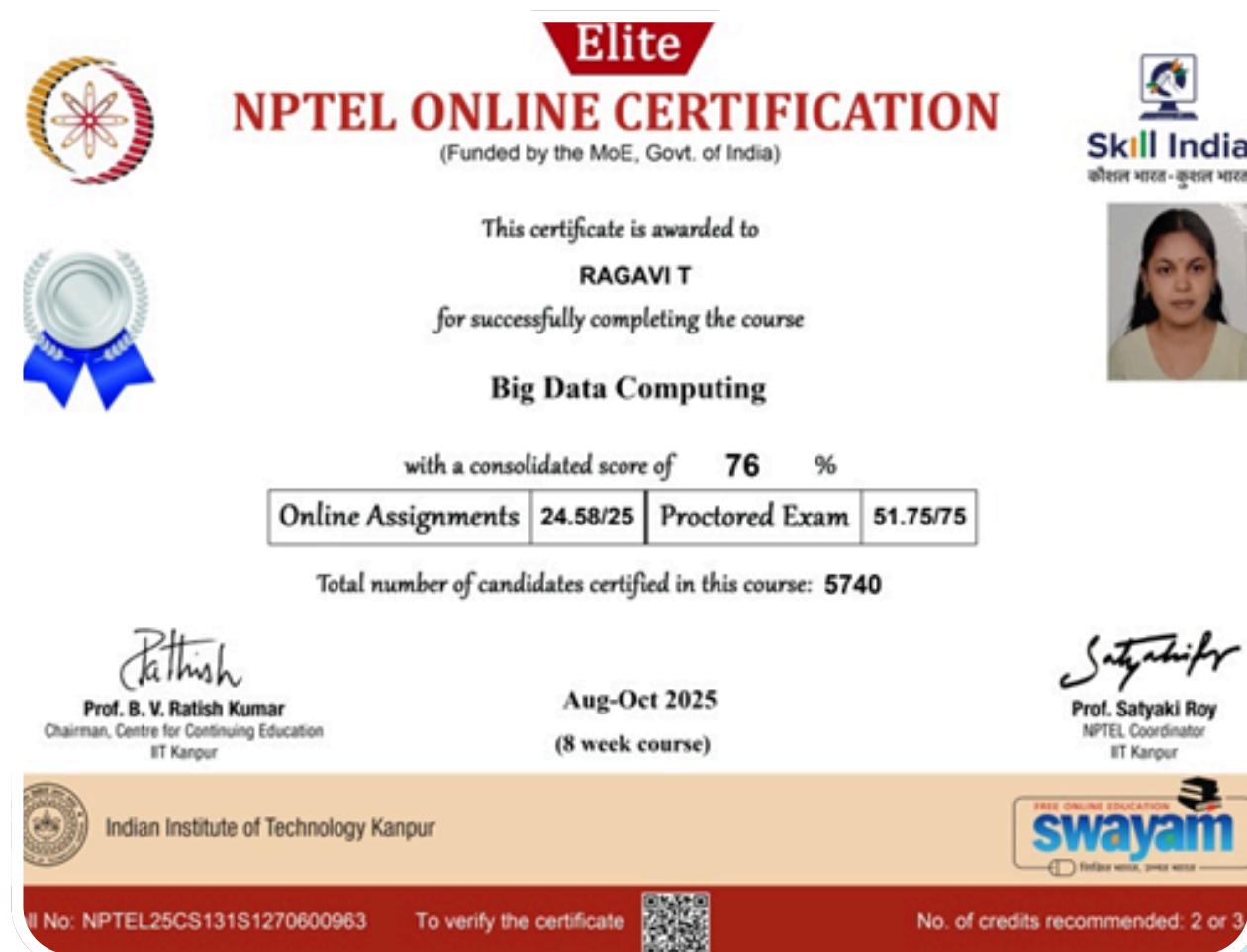
>> V. PATHMA PRIYA, II-AI&DS-A, AWARDED 12 WEEKS ONLINE CERTIFICATION COURSE ON "FUNDAMENTALS OF ARTIFICIAL INTELLIGENCE" OFFERED BY SWAYAM-NPTEL, ON JUL-OCT 2025.



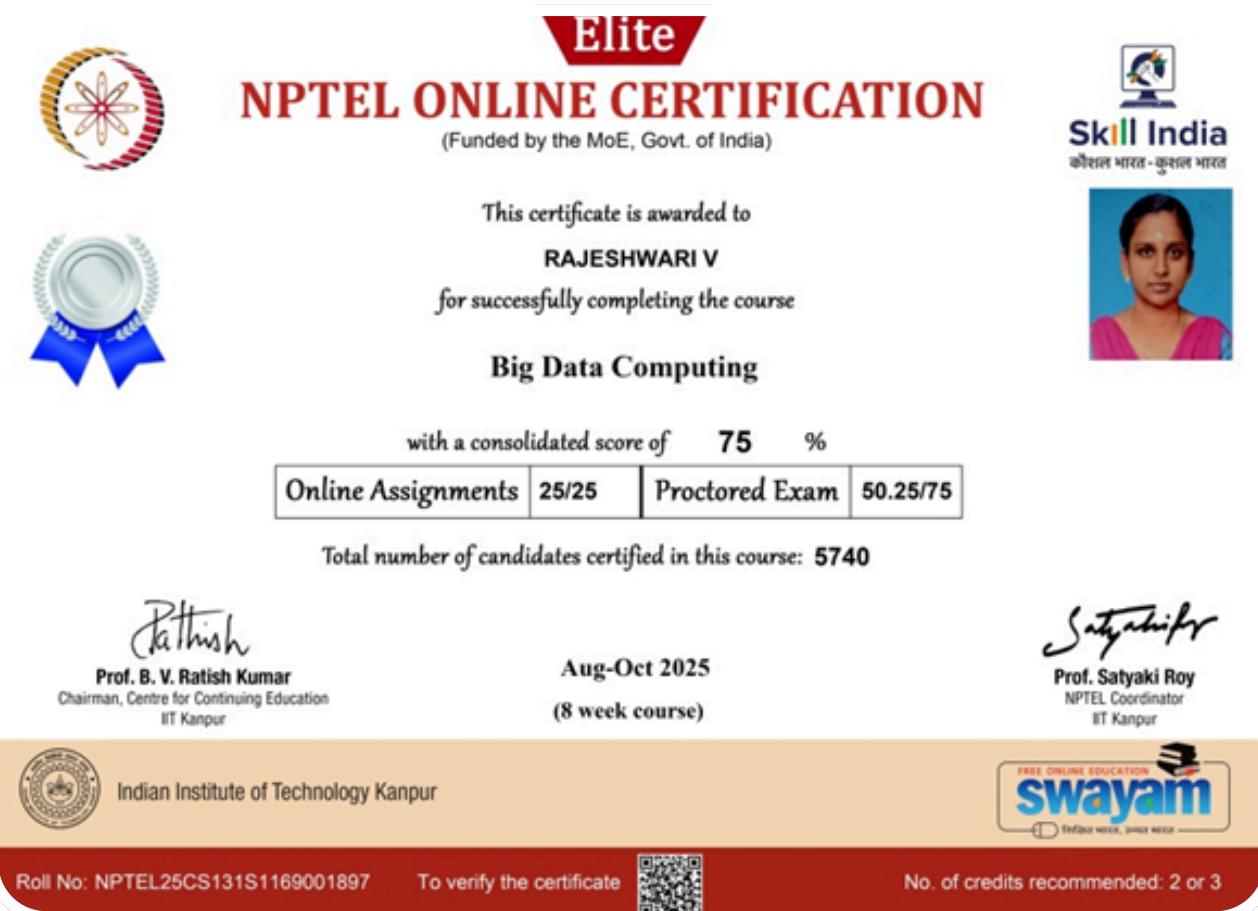
>> S. SREEJEYANTHI, III-AI&DS-B, AWARDED 8 WEEKS ONLINE CERTIFICATION COURSE ON "BIG DATA COMPUTING" OFFERED BY SWAYAM-NPTEL, ON AUG-OCT 2025.



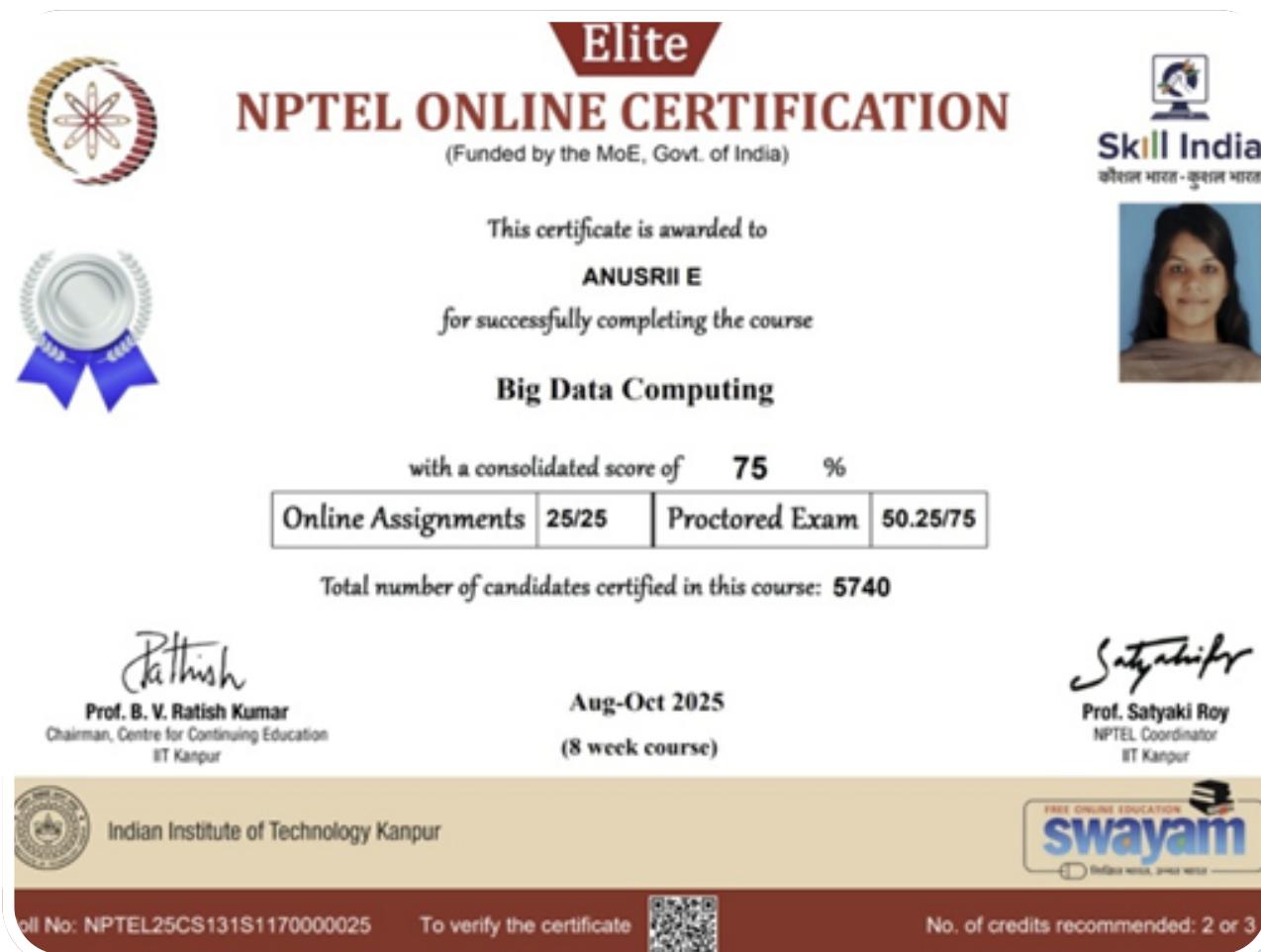
>> T. RAGAVI, III-AI&DS-B, AWARDED 8 WEEKS ONLINE CERTIFICATION COURSE ON "BIG DATA COMPUTING" OFFERED BY SWAYAM-NPTEL, ON AUG-OCT 2025.



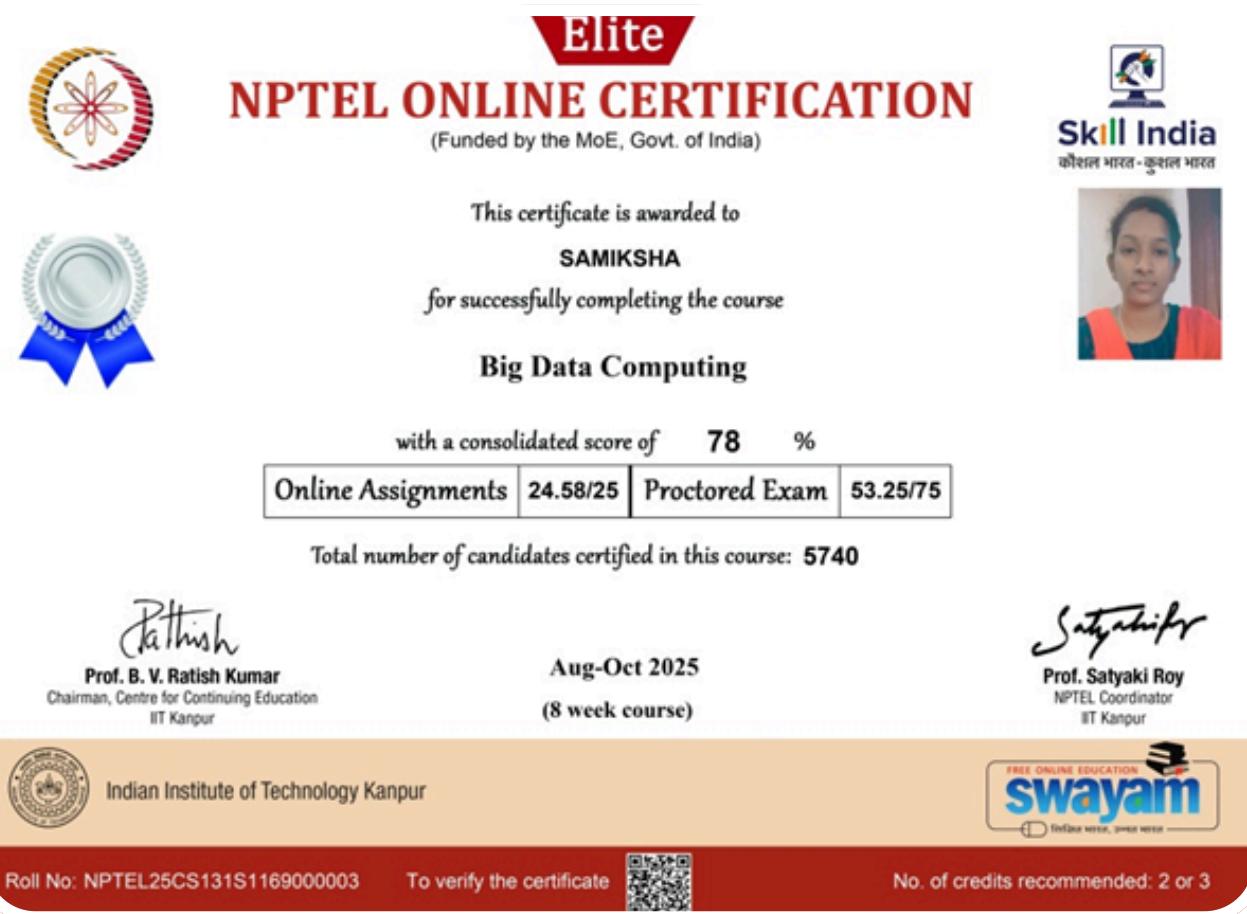
>> V. RAJESHWARI, III-AI&DS-B, AWARDED 8 WEEKS ONLINE CERTIFICATION COURSE ON "BIG DATA COMPUTING" OFFERED BY SWAYAM-NPTEL, ON AUG-OCT 2025.



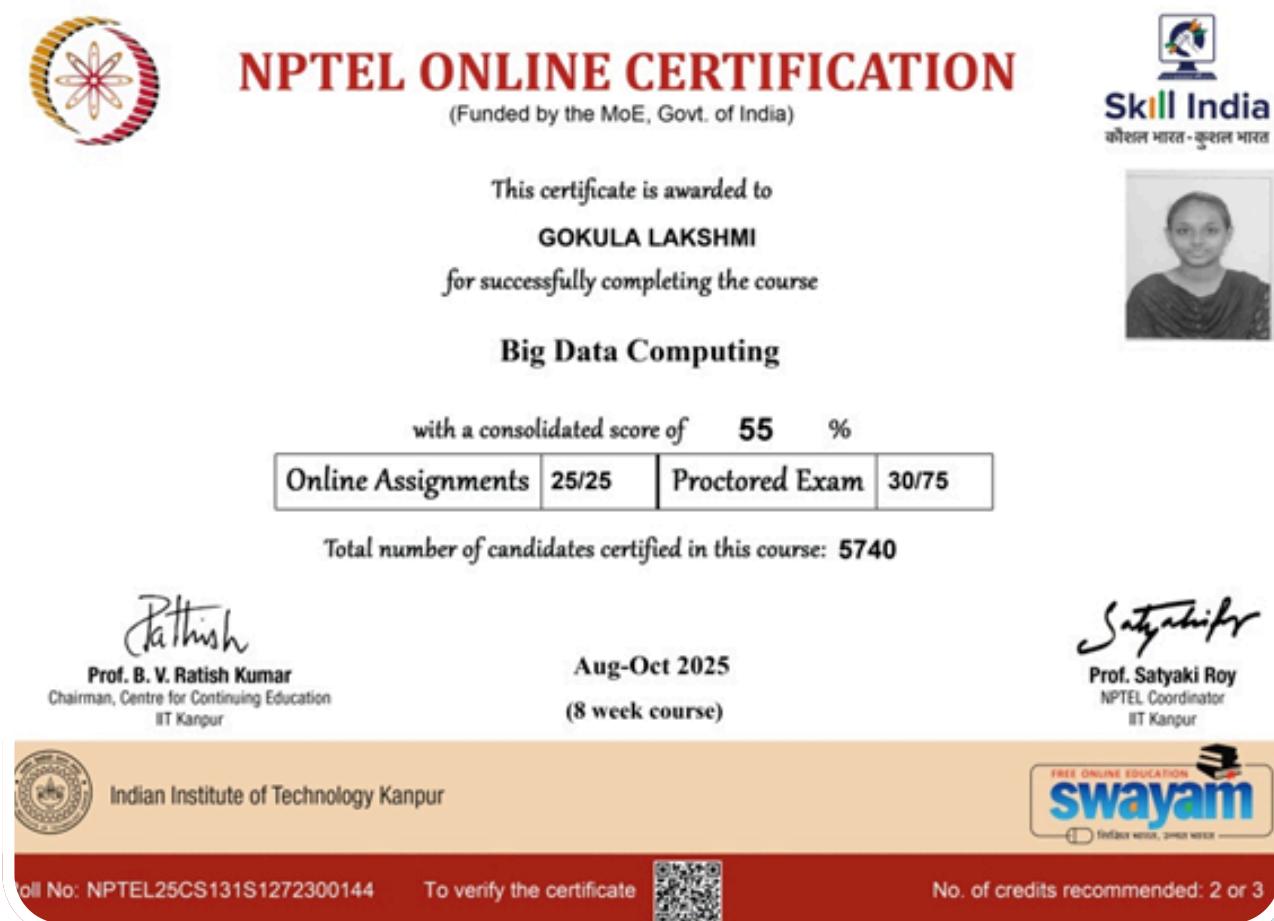
>> E. ANUSRII, III-AI&DS-B, AWARDED 8 WEEKS ONLINE CERTIFICATION COURSE ON "BIG DATA COMPUTING" OFFERED BY SWAYAM-NPTEL, ON AUG-OCT 2025.



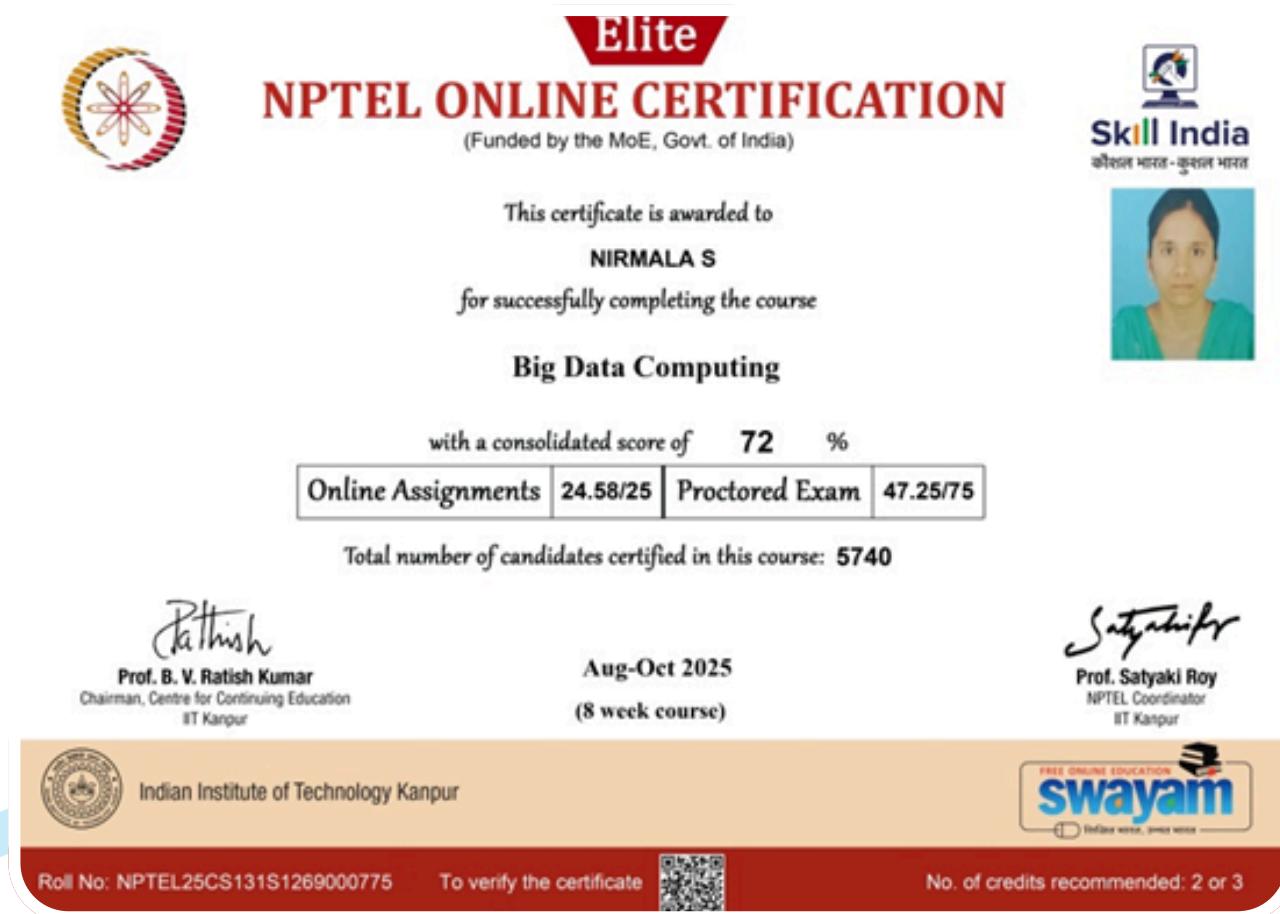
>> M.SAMIKSHA, III-AI&DS-B, AWARDED 8 WEEKS ONLINE CERTIFICATION COURSE ON "BIG DATA COMPUTING" OFFERED BY SWAYAM-NPTEL, ON AUG-OCT 2025.



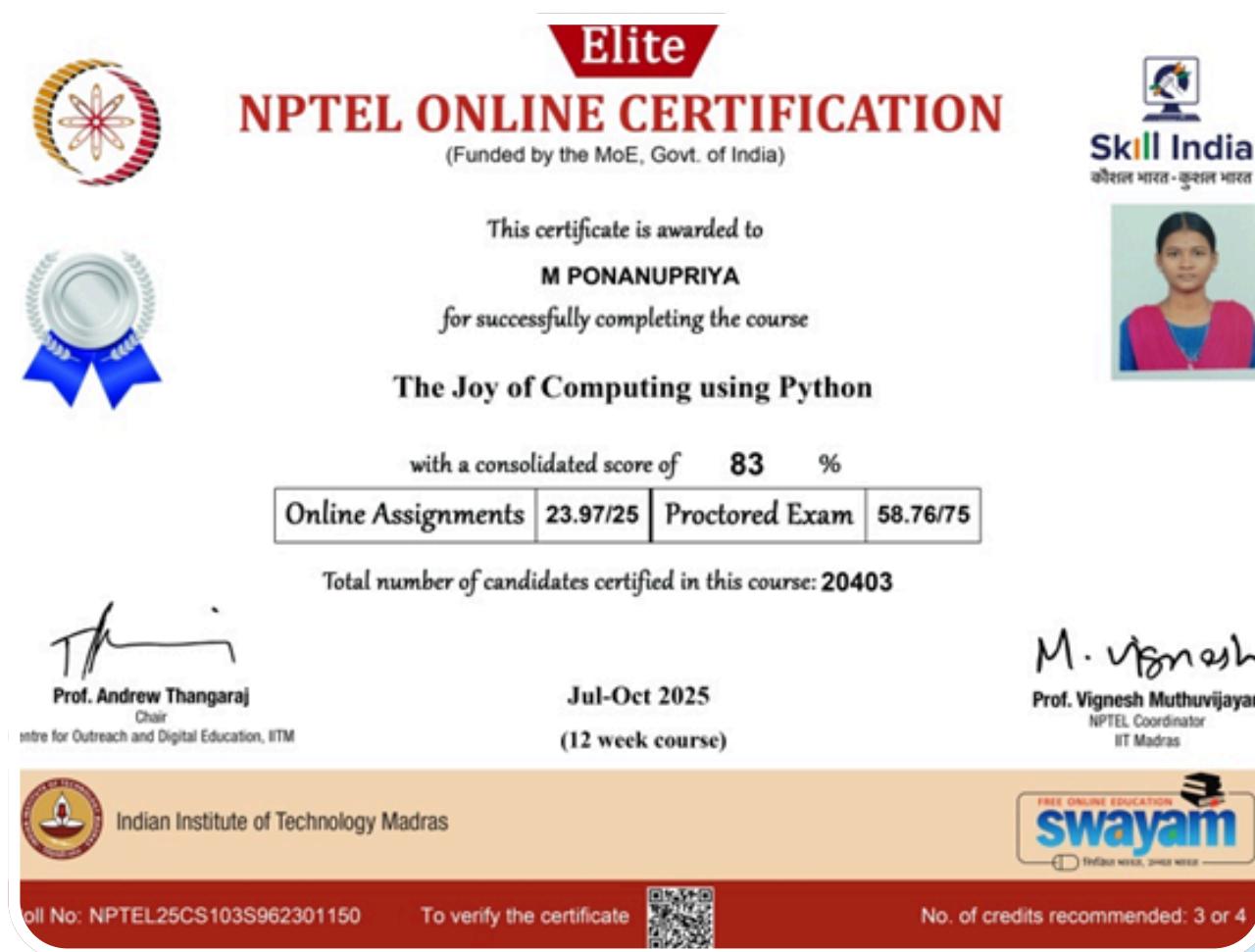
>> G. GOKULA LAKSHMI, III-AI&DS-B, AWARDED 8 WEEKS ONLINE CERTIFICATION COURSE ON "BIG DATA COMPUTING" OFFERED BY SWAYAM-NPTEL, ON AUG-OCT 2025.



>> S. NIRMALA, III-AI&DS-B, AWARDED 8 WEEKS ONLINE CERTIFICATION COURSE ON "BIG DATA COMPUTING" OFFERED BY SWAYAM-NPTEL, ON AUG-OCT 2025.



>> M. PONANUPRIYA, II-AI&DS-B, AWARDED 12 WEEKS ONLINE CERTIFICATION COURSE ON "THE JOY OF COMPUTING USING PYTHON" OFFERED BY SWAYAM-NPTEL, ON JUL-OCT 2025.



>> K.KALAI ARASI, M.MUTHUMALA, R.ABINAYA, P.ISHALAKSHMI, M.POOGA,
 II-AI&DS-A, T.PRINCY ROOPAVATHY, M. PRASITHA, M.MAGALAKSHMI, A.ARCHANA,
 P.ROSHINI , J. GULRASE , M. JEIESWARI, II-AI&DS-B, HAS SUCCESSFULLY
 PARTICIPATING IN THE EVENT "3D CHEF", ORGANIZED BY ECO CLUB & TAMIL
 MANDRAM, RIT, RAJAPALAYAM ON 16.10.2025.



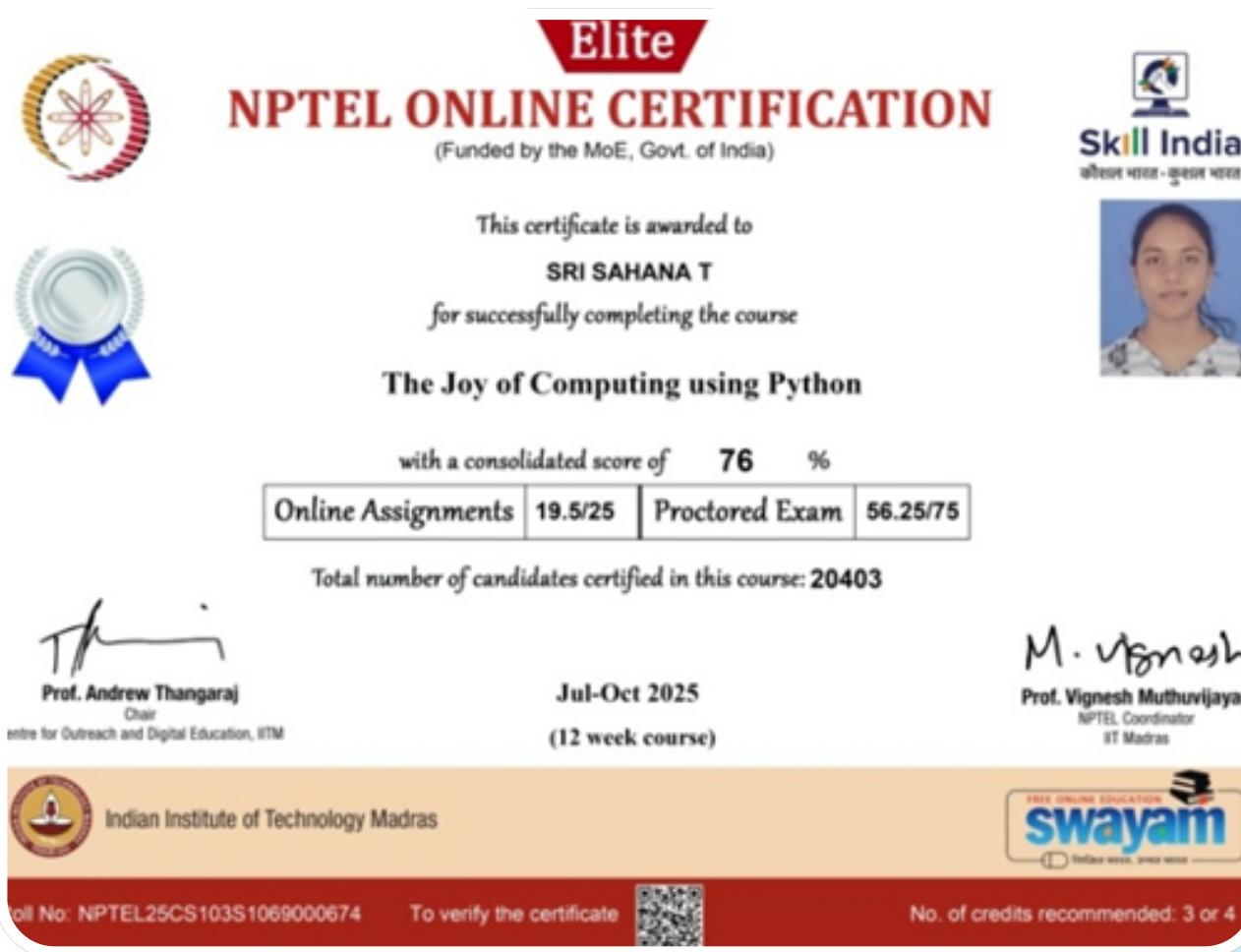
>> E.DHANALAKSHMI, K. MEERADHARSHNI , M.KRISHNAVENI , M.NITHIYA SRI ,
 R.ANUSHREE, A.UMABHARATHI, III-AI&DS-B, HAS SUCCESSFULLY PARTICIPATING IN
 THE EVENT "3D CHEF" , ORGANIZED BY ECO CLUB & TAMIL MANDRAM, RIT,
 RAJAPALAYAM ON 16.10.2025.



>> M.ARUMUGA TAMIL SELVAN, M.MATHANKUMAR, G.KALEESWARAN, IV-AI&DS-B, HAS SUCCESSFULLY PARTICIPATING IN THE EVENT "3D CHEF" , ORGANIZED BY ECO CLUB & TAMIL MANDRAM, RIT, RAJAPALAYAM ON 16.10.2025.



>> T. SRI SAHANA, I-AI&DS-B, AWARDED 12 WEEKS ONLINE CERTIFICATION COURSE ON "THE JOY OF COMPUTING USING PYTHON" OFFERED BY SWAYAM-NPTEL, ON JUL-OCT 2025.



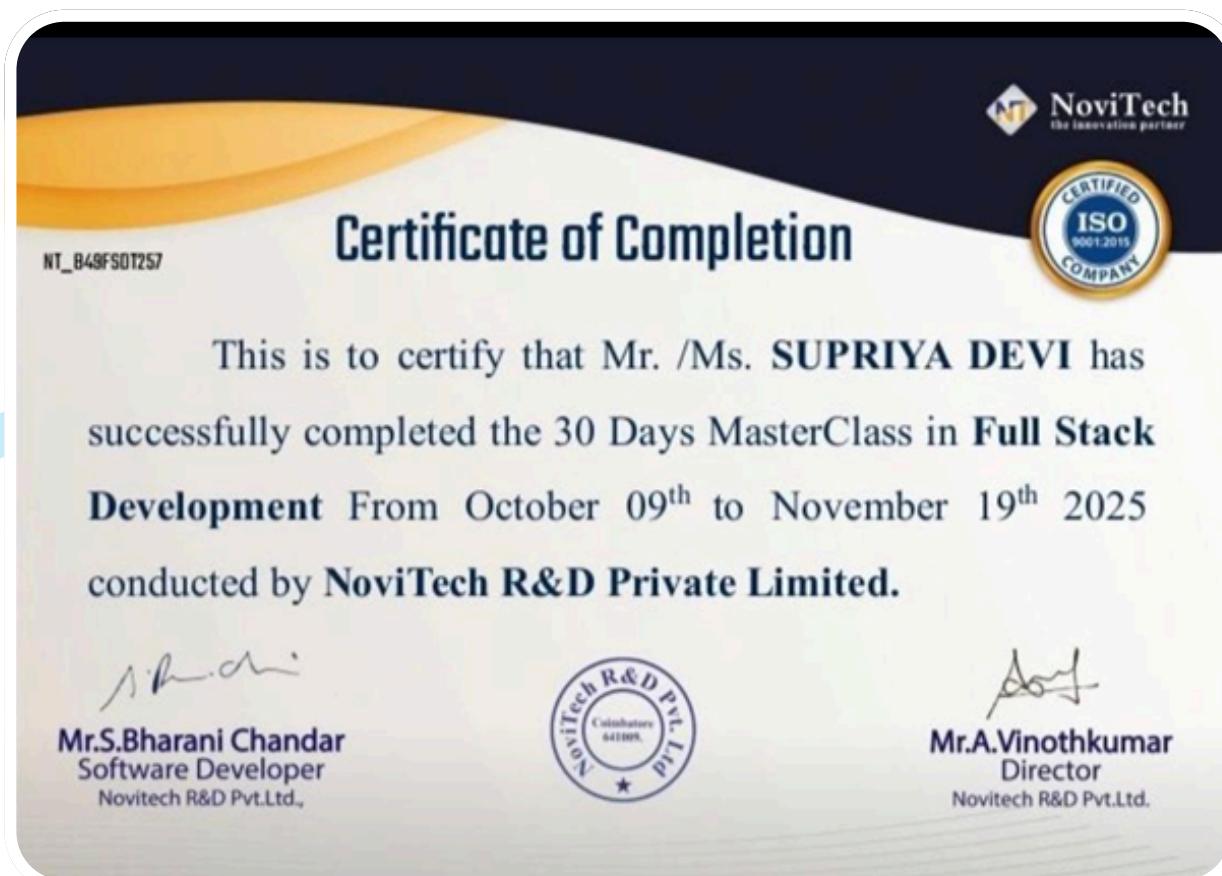
>> J.CHITRAKALA, A. HARI KRISHNAN, S.G.HARISHINI, S.D.JAGADIISH, M.MAHALAKSHMI, S.KAVYA SHREE, A.JEEVA SHRI, J.RAJADHARSINI, R.MUTHU GURU GOWSALYA, B.RATCHITA, R.SWETHA, IV-AI&DS-A, M.BRINDASRI, A.ABIRAMI, K. NITHYA SHREE, KARTHIKA LAKSHMI, S. SARAVANAKUMAR, L.VARSHA, C.SUBAMADHAVAN, M.THANGAMUTHUMARI PREETHI, IV-AI&DS-B, HAS SUCCESSFULLY COMPLETING THE TALENTNEXT COURSE ON "JAVA FULL STACK" DURING THE PERIOD JULY TO OCTOBER IN THE YEAR 2025, OFFERED BY WIPRO.



>> T.BLESSON PAUL, III-AI&DS-B, HAS SUCCESSFULLY PARTICIPATING IN THE "ZYPER EVENT 2025 - BRIDGE THE GAP, BUILD THE CONNECTION", HELD ON 23 NOV., 2025, AT BOW BLISS-RESTAURANT & CAFE, COIMBATORE.



>> A.SUPRIYA DEVI, II-AI&DS-A, HAS SUCCESSFULLY COMPLETED THE 30 DAYS MASTERCLASS IN "FULL STACK DEVELOPMENT", FROM OCTOBER 9TH TO NOVEMBER 19TH 2025 , CONDUCTED BY NOVITECH R&D PRIVATE LIMITED.



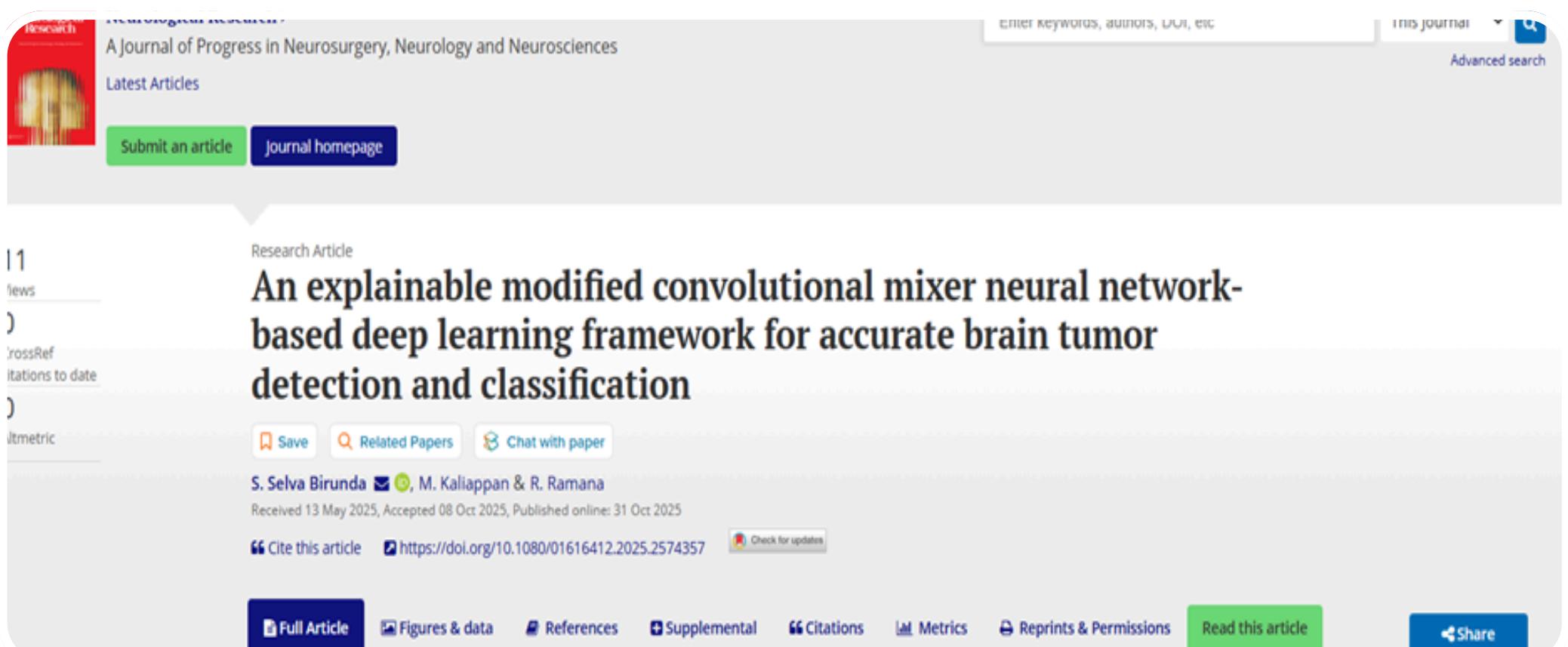
STUDENTS ACHIEVEMENT

>> J. GULRASE , M. JEIESWARI, II- AI&DS-B, HAS SUCCESSFULLY PARTICIPATING IN THE EVENT "3D CHEF" , GOT THE THIRD PLACE , ORGANIZED BY ECO CLUB & TAMIL MANDRAM, RIT, RAJAPALAYAM ON 16.10.2025.



FACULTY PUBLICATION

>> S. SELVA BIRUNDA, M. KALIAPPAN, & R. RAMANA, (2025). AN EXPLAINABLE MODIFIED CONVOLUTIONAL MIXER NEURAL NETWORK-BASED DEEP LEARNING FRAMEWORK FOR ACCURATE BRAIN TUMOR DETECTION AND CLASSIFICATION. NEUROLOGICAL RESEARCH, 1–16. [HTTPS://DOI.ORG/10.1080/01616412.2025.2574357](https://doi.org/10.1080/01616412.2025.2574357).



The screenshot shows the homepage of the Neurological Research journal. The header includes the journal logo, the title 'A Journal of Progress in Neurosurgery, Neurology and Neurosciences', a search bar, and links for 'THIS JOURNAL' and 'Advanced search'. Below the header, there are buttons for 'Submit an article' and 'Journal homepage'. The main content area displays a research article titled 'An explainable modified convolutional mixer neural network-based deep learning framework for accurate brain tumor detection and classification'. The article is authored by S. Selva Birunda, M. Kaliappan, and R. Ramana. It was received on 13 May 2025, accepted on 08 Oct 2025, and published online on 31 Oct 2025. The DOI is <https://doi.org/10.1080/01616412.2025.2574357>. The article page includes links for 'Full Article', 'Figures & data', 'References', 'Supplemental', 'Citations', 'Metrics', 'Reprints & Permissions', 'Read this article', and 'Share'.

>> R.S. SELVI, R . R . MURUGESAN., J. WEKALAO., & A. RAJAKANNU, (2025).

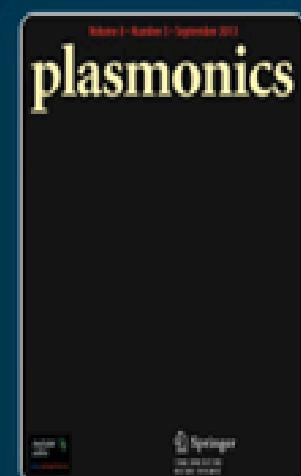
ADVANCED MXENE-GOLD HYBRID PLASMONIC BIOSENSOR FOR EARLY DETECTION OF TUBERCULOSIS BIOMARKERS WITH MACHINE LEARNING OPTIMIZATION. PLASMONICS (NORWELL, MASS.). DOI:10.1007/S11468-025-03178-Y.

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Advanced MXene-Gold Hybrid Plasmonic Biosensor for Early Detection of Tuberculosis Biomarkers With Machine learning optimization

RESEARCH | Published: 28 October 2025

(2025) [Cite this article](#)



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[R. Senthamizh Selvi](#) , [Rajeshwari Ramaiah Murugesan](#), [Jacob Wekalao](#) & [Amuthakkannan Rajakannu](#)

[Access this article](#)

>> TRIPATHY, J., KALIAPPAN, M., CHELLATHEVAR, G. K., RAJ, J. R. F., SHANMUGASUNDARAM, R., ALAGARSAMY, M., ... ALGAHTANI, A. (2025). INTEGRATING BLOCKCHAIN AND IOT WITH ADVANCED PREDICTIVE MODELING FOR ENERGY EFFICIENT URBAN TRANSPORTATION SYSTEMS. *SUSTAINABLE COMPUTING INFORMATICS AND SYSTEMS*, 48(101208), 101208. DOI:10.1016/J.SUSCOM.2025.101208



Sustainable Computing: Informatics and Systems

Volume 48, December 2025, 101208



Integrating blockchain and iot with advanced predictive modeling for energy efficient urban transportation systems

Ask Copilot: Save time, read 10X faster with AI

Save

Related Papers

Evidence/Examples Used

Points Discussed

Conclusions

Biases or Limitations

Key Takeaways

Purpose

Jyotsnarani Tripathy^a , M. Kaliappan^b , Gnana Kousalya Chellathevar^c , J. Relin Francis Raj^d , Ravivarman Shanmugasundaram^e , Manjunathan Alagarsamy^f , S.Patricia Nancy^g , Ali Algahtani^{a b h i}

>> RAVINDRAN, S., BALACHANDRAN, G. B., MURUGESAN, P., & RAMACHANDRAN, M. E. (2026). APPLIED THERMAL ENHANCEMENT IN SOLAR DESALINATION: A HYBRID PV/T SYSTEM WITH FAN AND SCRAPER ASSIST. APPLIED THERMAL ENGINEERING, 282(128861), 128861. DOI:10.1016/J.APPLTHERMALENG.2025.128861.



Research Paper

Applied Thermal Enhancement in Solar Desalination: A Hybrid PV/T System with Fan and Scraper Assist

Santhiya Ravindran , Gurukarthik Babu Balachandran , Palpandian Murugesan , Muthu Eshwaran Ramachandran

¹ Department of Electronics and Communication Engineering, Mysore Technical Engineering College, Mysore, Tamil Nadu 626009, India

² Department of Electrical and Electronics Engineering, Kamaraj College of Engineering and Technology, Madurai, Tamil Nadu 625011, India

³ Department of Electrical and Electronics Engineering, AVM College of Engineering and Technology, Alanganallur, Madurai, Tamil Nadu 625 023, India

⁴ Department of Artificial Intelligence and Data Science, Kumar Institute of Technology, Kuppam, Tamil Nadu 626127, India

ARTICLE INFO

Keywords:
Desalination
Energy/energy payback time
Hybrid system
Solar photovoltaic module
Water

ABSTRACT

Water is essential for all living beings, making the preservation of existing resources crucial to addressing water scarcity. However, many water sources are polluted or saline, making them unsuitable for drinking. Converting saline water into fresh water is vital for future demand management. A solar still (SS) based desalination system effectively transforms polluted water into potable water, but traditional systems suffer from low efficiency due to high evaporation and condensation rate. This study proposes a hybrid PV/T (photovoltaic/thermal) system containing conventional SS with a metal scraper (CSSMS), double fan (CSSDF), and both combined (CSSMSDF). The obtained results reveal that the hybrid PV/T system integrated with CSSMSDF exhibits superior performance compared to the other cases, achieving minimum desalination production cost of 0.011 \$/L, maximum annual water yield of 948,663 L/m², payback period of 1.77 years (for energy) and 25.04 years (for energy). Specifically, it achieves additional energy/energy efficiency of (8.99 %, 0.82 %) over CSS, (7.69 %, 0.44 %) over CSSMS and (1.04 %, 0.08 %) over CSSDF.

1. Introduction

Water is an important and basic source for the survival of every human. Statistical data reveal that nearly 70 % Earth's surface is dominated by water. Its resource may be either naturally present or produced through human activities. The water that produced naturally is either freshwater or saline water that depends on the salinity level. In the world water resources, 96.5 % of world water is found in the oceans and seas with average salinity of 350 ppm, where ice caps shared 1.7 %, underground in aquifers is shared 1.6 %, and rivers & lakes shared only 0.015 %. The freshwater is naturally renewable which are found in rivers, lakes and in underground aquifers. Aquifers hold the estimated volume of (10,530*1000) km³ followed by the Lakes & rivers with 91,000 km³ and 21,00 km³ respectively. This water is used to serve various purposes with direct human consumption of 10–12 %, 15 % for irrigation and 70–75 % for agriculture purposes. The consumption of freshwater is higher its natural recharge rates. Although the surface water is common, it represents only 0.27 % of fresh water. Due to

industrialization, urbanization the resources for water are increasingly polluted and leads to water scarcity [1,2]. So, it is most significant to get possible drinking water by converting polluted water for managing the demand of freshwater.

Desalination [3] is the process that take out the minerals and dissolved salts from the seawater or brackish water, thereby making it suitable for drinking with a parts per million of less than 500. The conventional desalination methods like vapor compression, ionization, dehumidification, ion exchange, electro-dialysis, thin-film desalination and reverse osmosis are found to be complex and expensive process. Solar [4,5] still based desalination [6,7] has gained attraction in the arid areas which have abundant sunshine duration and scarce for fresh water. In SS, water is left in a container which is in open condition to evaporate and reach the air form. SS is functions to capture the evaporated water and condense it on the cold surface. The sluggish evaporation process of pure water leads for leaving whole contaminants within the system. The major benefits of solar stills [8] are, it is reliable system, low cost, simple maintenance and less environmental impact. Meanwhile, its drawback is the low conversion efficiency and

* Corresponding author.

E-mail addresses: santhyas7912@gmail.com (S. Ravindran), mapb@gmail.com (G.B. Balachandran), palpandian@gmail.com (P. Murugesan), muthu1999@gmail.com (M.E. Ramachandran).

<https://doi.org/10.1016/j.applthermaleng.2025.128861>

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