



AI RESEARCH CENTRE

WOXSEN UNIVERSITY

ONE-YEAR ONLINE PG CERTIFICATE PROGRAM

Artificial Intelligence &
Data Science



This program prepares learners to become AI & Data Science professionals with strong foundations in mathematics, statistics, machine learning, deep learning, and data engineering, capable of building robust, production-oriented AI and data science systems.

This is a core AI & Data Science program for learners seeking depth, rigor, and system-level understanding, beyond analytics-focused or tool-centric courses.

Program Duration

1 Year | 2 Semesters | Fully Online

Eligibility

- Any UG degree recognized by UGC
- Recommended for:
 - BE / BTech / BSc (Engineering, CS, Math, Statistics)
 - Working professionals in software, analytics, or data roles
- Basic programming aptitude expected (bridge modules provided)

Fees

- INR 75,000 – Indian Learners
- USD 1,200 – International Learners

(Same fee structure as Program 1)

Capstone Project

End-to-End AI & Data Science System Design & Deployment

(Complete data science lifecycle with deployment and governance awareness)

Target Group

- Final-year engineering and science students targeting Data Scientist or ML Engineer roles
- Software engineers and analysts transitioning into AI & Data Science
- Professionals seeking strong statistical and ML depth
- Practitioners wanting industry-ready DS capability

Career Outcomes

Graduates are prepared for roles such as:

- Data Scientist
- Machine Learning Engineer (Entry-Level)
- Applied AI Engineer
- AI & Data Science Analyst
- ML-Focused Research or Product Support Roles

Skills Gained

- Python programming for AI & data science
- Advanced statistics and probabilistic reasoning
- Feature engineering and data quality management
- Classical and advanced machine learning
- Deep learning and representation learning
- Data engineering fundamentals for AI pipelines
- Model evaluation, reliability, and validation
- Deployment-aware AI system design
- Responsible AI foundations (mandatory)

Curriculum Structure

Semester I – Foundations of AI & Data Science

- Programming for Data Science (Python, NumPy, Pandas) – 4 Credits
- Advanced Statistics & Probability for Data Science – 4 Credits
- Data Wrangling & Feature Engineering – 4 Credits
- Classical Machine Learning – 4 Credits
- SQL & Data Modelling for AI Systems – 4 Credits
- AI Problem Framing & Solution Design Lab – 2 Credits

Outcome:

Learners can design statistically sound, well-evaluated ML models using structured data.

Semester II – Deep Learning, Data Engineering & Application

- Deep Learning & Representation Learning – 4 Credits
- Data Engineering for AI & Data Science – 4 Credits
- Applied AI & Data Science Across Domains – 4 Credits
- AI & DS System Deployment Foundations – 4 Credits
- Capstone Project – AI & Data Science System – 6 Credits

Outcome:

Learners can build, validate, and operationalize AI & DS systems responsibly.

Capstone & Internship

Industry-Integrated Capstone

- End-to-end AI & Data Science project
- Includes:
 - problem formulation
 - data engineering
 - model development and evaluation
 - deployment strategy
 - risk and governance awareness
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Internship Option

- Eligible graduates may opt for a 6-month to 1-year in-person internship with the AI Research Centre, Woxsen University
- Top 3 candidates may receive a stipend of ₹15,000 per month
- Focused on live AI & Data Science research and industry projects
- Free mentorship during the internship period

Learning & Evaluation

- LMS-based self-paced learning
- Live expert sessions and review workshops
- Continuous assessment: 30%
- End-semester examination: 70%

Award & Credential Verification

Postgraduate Certificate

Issued by Woxsen University – AI Research Centre

All certificates issued under these programs are digitally recorded and verified using blockchain-based credentialing infrastructure, enabling:

- Secure, tamper-proof certification records
- Online credential verification from anywhere in the world
- Instant verification by employers, institutions, and partners
- Protection against credential fraud and misrepresentation

This ensures global credibility, long-term verifiability, and trust in the academic credentials issued by Woxsen University.

Facilitators:

Dr. Hemachandran K

Director – AI Research Centre | Vice Dean – School of Business

Program Lead : AI Agents, Prompt Engineering, NLP, Machine Learning and Responsible AI

Dr. Hemachandran K is the Director of the AI Research Centre and Vice Dean at Woxsen University, with over 15+ years of experience spanning AI research, industry projects, and global policy advisory. A UNESCO Expert, European Commission technology advisor, and AI Accelerator Institute Ambassador, his expertise includes NLP, Computer Vision, Generative AI, autonomous systems, and responsible AI governance. He has authored 25+ books, filed 80+ patents, and led large-scale AI deployments across healthcare, aviation, smart cities, and education.

Dr. Rajesh Kumar K V

Chief Technology Officer – AI Research Centre

Lead Faculty: Applied AI, Data Science, GenAI & AI Engineering

Dr. Rajesh Kumar K V is the Chief Technology Officer at the AI Research Centre with 12+ years of experience in AI product development, analytics, and enterprise transformation. A Certified Scrum Master and SAFe practitioner, he specializes in LLM-powered systems, agentic AI, analytics platforms, and MLOps-oriented deployments. He has worked across healthcare, defense, sports analytics, and digital transformation projects, bridging research with scalable enterprise AI solutions.

Dr. Shyam Joshi

Research Scientist – AI Research Centre

Lead Faculty: Deep Learning, AI Systems, Robotics & Multi-Agent Systems

Dr. Shyam Joshi holds a PhD from IIT Delhi and is a former Postdoctoral Researcher at Scuola Superiore Meridionale, Naples. His research spans deep learning, pattern recognition, computational neuroscience, synchronization theory, robotics, and multi-agent systems. He has held research roles at IIT Jodhpur and national innovation hubs, and is an inventor on multiple AI and robotics patents, including necrobotics-based systems and intelligent monitoring solutions.

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