

# AI -ARTIFICIAL INTELLIGENCE PROGRAM

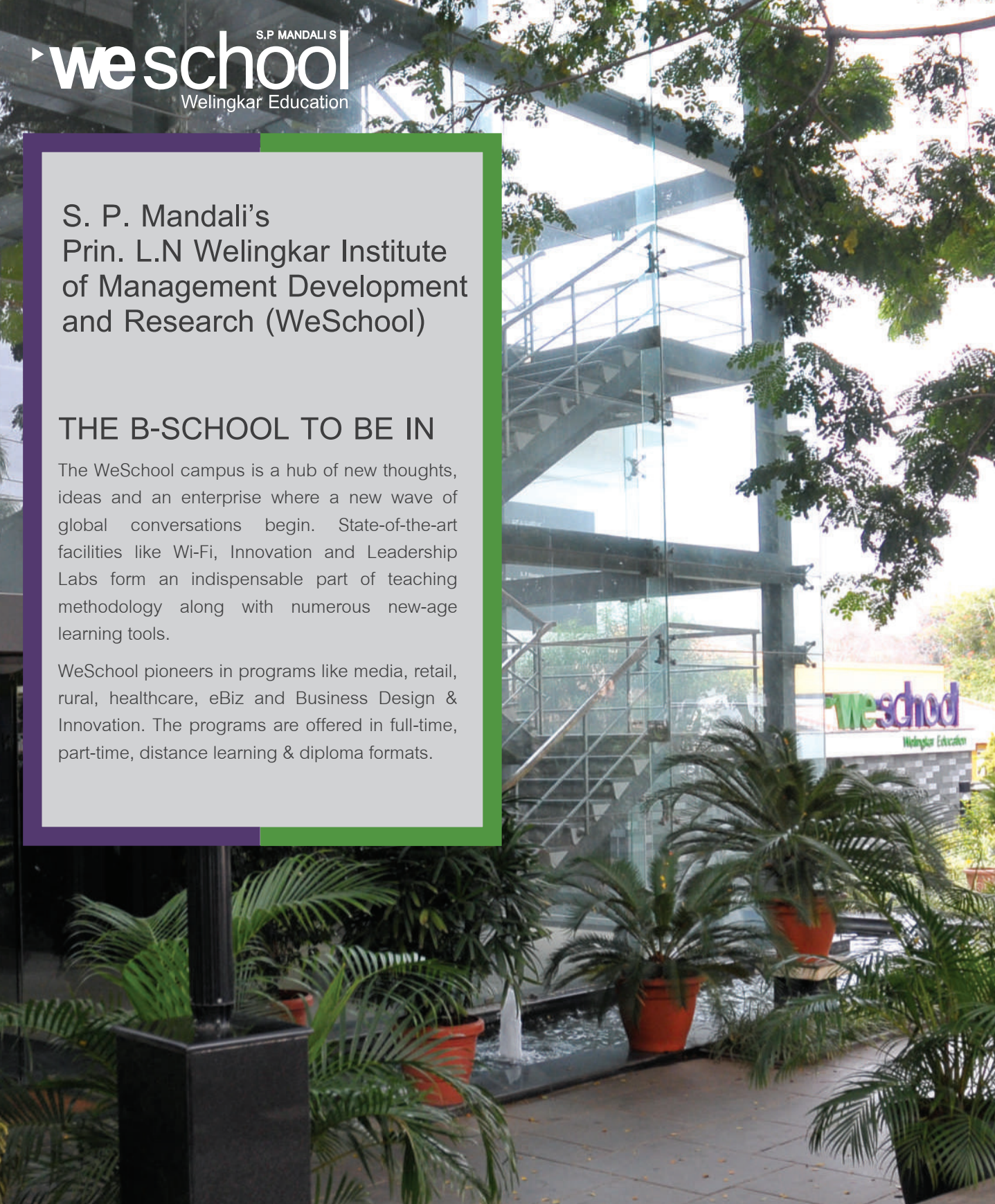


## S. P. Mandali's Prin. L.N Welingkar Institute of Management Development and Research (WeSchool)

### THE B-SCHOOL TO BE IN

The WeSchool campus is a hub of new thoughts, ideas and an enterprise where a new wave of global conversations begin. State-of-the-art facilities like Wi-Fi, Innovation and Leadership Labs form an indispensable part of teaching methodology along with numerous new-age learning tools.

WeSchool pioneers in programs like media, retail, rural, healthcare, eBiz and Business Design & Innovation. The programs are offered in full-time, part-time, distance learning & diploma formats.





## A WORD FROM OUR MANAGEMENT



**Prof. Dr. Uday Salunkhe,**

Group Director, WeSchool  
Eisenhower Fellow,  
Chairman, CII- Western  
Region, Higher Education  
Sub Committee

Market volatility, rapid innovation and geopolitical strife are fuelling a demand for business professionals who can think globally and compete strategically. The realities of global competition and technological changes have dramatically raised the bar on what it takes to create and maintain a competitive advantage. Navigating today's complex business would require vision, confidence and strategies that give tangible business results. There is a paradigm shift in business from businesses driving technology to technology driving your business. As a leader, you will need to take decisions using data analytics. Your organisation is on the lookout for new skillsets including Design Thinking, innovation, data driven decision making, artificial intelligence, parallel processing ability and safe skills to drive the business.

It is my pleasure to welcome you to WeSchool's 3 day program on Artificial Intelligence & Data Analytics. As a leader, you also need to move forward faster, multi-task efficiently, make the right decisions fast and deploy across industries. I am sure the exposure to this program will benefit you in your progressive journey.



**Dr. Anil Rao Paila,**

Senior Dean & Director,  
WeSchool, Bengaluru  
Campus

I am delighted to state that under the able leadership of our Group Director, Prof. Dr. Uday Salunkhe, WeSchool, Bengaluru had a humble beginning eleven years ago and has established its presence in the Silicon Valley of India. The Management Development Centre at WeSchool, Bengaluru has been at the forefront since its inception and has succeeded in providing and designing high-quality customized development programs for companies like Infosys, Robert Bosch, Dell, HP, Biocon, E & Y, SPAR, Continental Auto, to name a few. Today's highly competitive business environment puts a great deal of emphasis on upgradation and learning. Hence, it is imperative that individuals continue to explore new perspectives. WeSchool's campus at Electronic City, Bengaluru, provides the right ambience for managers, leaders and entrepreneurs to introspect and reflect amidst an academic environment. Our 3 day Artificial Intelligence Foundation Program is designed for Senior Leaders, Business heads, entrepreneurs, decision makers to upskill their knowledge in AI. This program will benefit you to discover advance cloud based tools and technologies in AI/ ML / DL models and build classifiers using datasets which will help you be at par with changing trends.

# ARTIFICIAL INTELLIGENCE TODAY & TOMORROW

Artificial Intelligence, popularly known as 'AI', is the new buzzword one can hear everywhere. In fact, some organizations have already started training their employees on the latest AI skills. While some have moved ahead in the game, other organizations still keep data in cartels and teams in silos. In fact, the average enterprise isn't ready for what AI is about to demand. Artificial Intelligence works best when it brings together data & teams from various disciplines. It also requires structures & skills for human-machine collaboration.

PWC has predicted that 'AI will come down to earth and get to work'. Currently, AI is ready to automate increasingly complex processes, identify new trends to create business value & provides forward-looking intelligence. AI is often entering through the backdoor as applications incorporate it everyday. This results into ease of work for humans who can utilize this time to make better strategic decisions and allows employees to improve their efficiency further. Since traditional ROI measures may not capture this value, organizations will want to consider new ones to better understand what AI can do for them. AI is becoming more user-friendly than ever. Very soon, programming will not be required. AI will be crucial to enterprises when retail analysts, engineers, accountants and many other domain experts will know how to contextualize and prepare data. It is not long before AI will be moving from computer labs to every home and daily human lives, making these functional specialists even more important than computer scientists.

\*Source: [www.pwc.com](http://www.pwc.com)

## How workers think about human-machine AI centaurs



Source: PWC Consumer Intelligence Series: Bot Me, 2017. Base: 500 business executives agree with the statement



50% consuming more false information than true

TRUST

30% Visual & Voice search drive commerce revenue

SEARCH

5 of 7 digital giants self-disrupt

DISRUPTION

1 billion cryptocurrency value created in banking

BLOCK CHAIN

AI

Real or fake?  
Counterfeit Reality

AI

50% BOT Development over Mobile App Development

TALENT

40% IT Versatility with people-centric roles

Half IoT security spent on Remediation

SECURITY

2.3 Million net new jobs versus 1.8 M eliminated

AI

95% products contain IOT

IOT

# GARTNER'S TOP 10 STRATEGIC PREDICTIONS FOR 2018 & BEYOND



AI is typically defined as the ability of a machine to perform cognitive functions like perceiving, reasoning, learning, interacting with the environment, problem solving, and even exercising creativity. Examples of technologies that enable AI to solve business problems are robotics and autonomous vehicles, computer vision, language, virtual agents, and machine learning. John McCarthy, widely recognized as one of the godfathers of AI, defined it as “the science and engineering of making intelligent machines.”

### Machine Learning

Most recent advances in AI have been achieved by applying Machine Learning to very large data sets. Machine Learning algorithms detect patterns and learn how to make predictions and recommendations by processing data and experiences, rather than by receiving explicit programming instructions. The algorithms also adapt in response to new data and experiences to improve efficacy over time. It provides predictions and prescriptions. Major types of Machine Learning are Supervised Learning, Unsupervised Learning and Reinforcement Learning.

### Deep Learning – A Hot Topic in AI

Deep Learning is a type of machine learning that can process a wider range of data resources, requires less data pre-processing by humans and can often produce more accurate results than traditional machine learning approaches. In Deep Learning, interconnected layers of software-based calculators known as ‘neurons’ form a neural network. The network can ingest vast amounts of input data and process them through multiple layers that learn complex features of the data at each layer.

Some of the of Business Use cases are as follows:

### Machine Learning

- Predicting call volume in call centers for staffing decisions
- Predict power usage in an electrical distribution grid

### Deep Learning

- Diagnose Health diseases from medical scans
- Detect a company logo in social media to better understand joint marketing opportunities (eg. pairing of brands in one product)
- Detect defective products on a production line through images.



## PROGRAM OBJECTIVES

### DISCOVER

- State of the art advanced cloud based tools and technologies in AI/ML / DL
- Open source Deep Learning frameworks
- Scikit-learn, keras, Python, Colab Notebook, Tensorflow and Pytorch

### DEVELOP

- ML/DL models and build classifiers using datasets
- Pre-Processing Data, Handle missing data, Identify and remove outliers, Feature Engineering

### DEPLOY

- Save and productionize the models

## COURSE STRUCTURE

### DAY 01

Introduction to AI/ML/DL • Supervised & Unsupervised Learning • Pandas and Numpy • Exploratory Data Analysis • Data Visualization using Matplotlib, Seaborn • Preprocessing – Missing data, Outliers, Scaling & Normalization • Train, Test Split, Cross Validation • Building Models (Regression, Classification) using Scikit-Learn • Measure Model errors, accuracy

Deep Neural Network Models using Keras • Introduction to Tensorflow • Tensorflow - Estimator, Data, Eager Execution, Layers • Build Feature Columns • Use the Dataset API to construct data pipeline • Random Forest • Decision Tree • SVM • Build Neural Network Models using Tensorflow, Natural Language Processing (NLP)

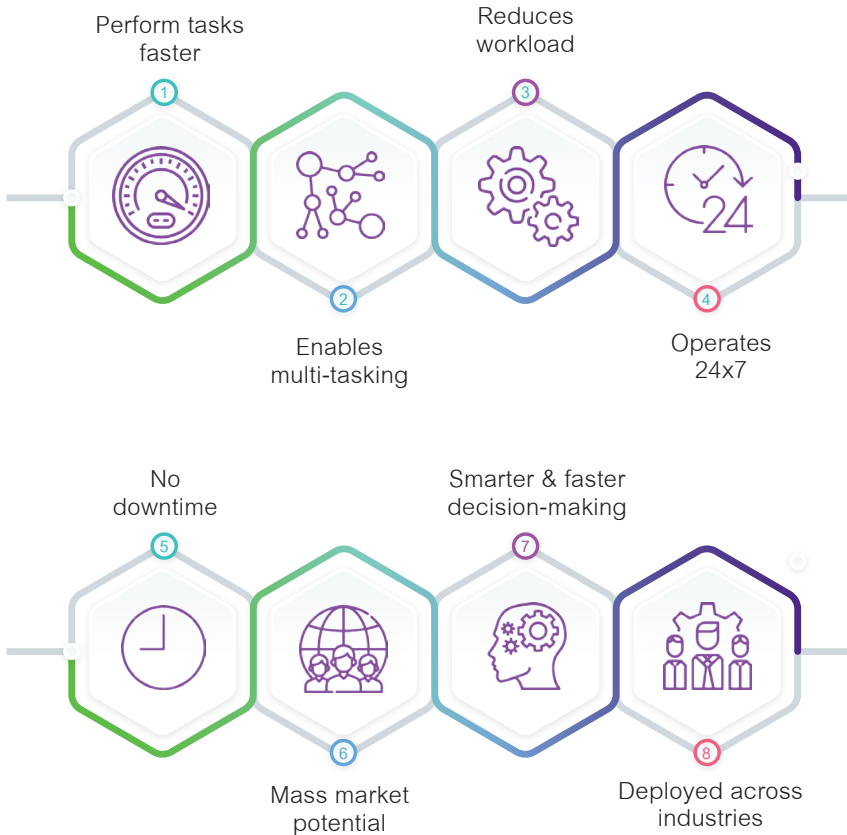
### DAY 02

### DAY 03

Introduction to RNN & CNN • Build CNN Models using Keras • Build a Digits Image classifier using the MNIST dataset • Build a Classifier using Fashion-MNIST dataset • Build a LSTM neural network • Predict Movie ratings using the IMDB dataset • Dimensionality Reduction • PCA, t-SNE Visualization using Tensorflow Board



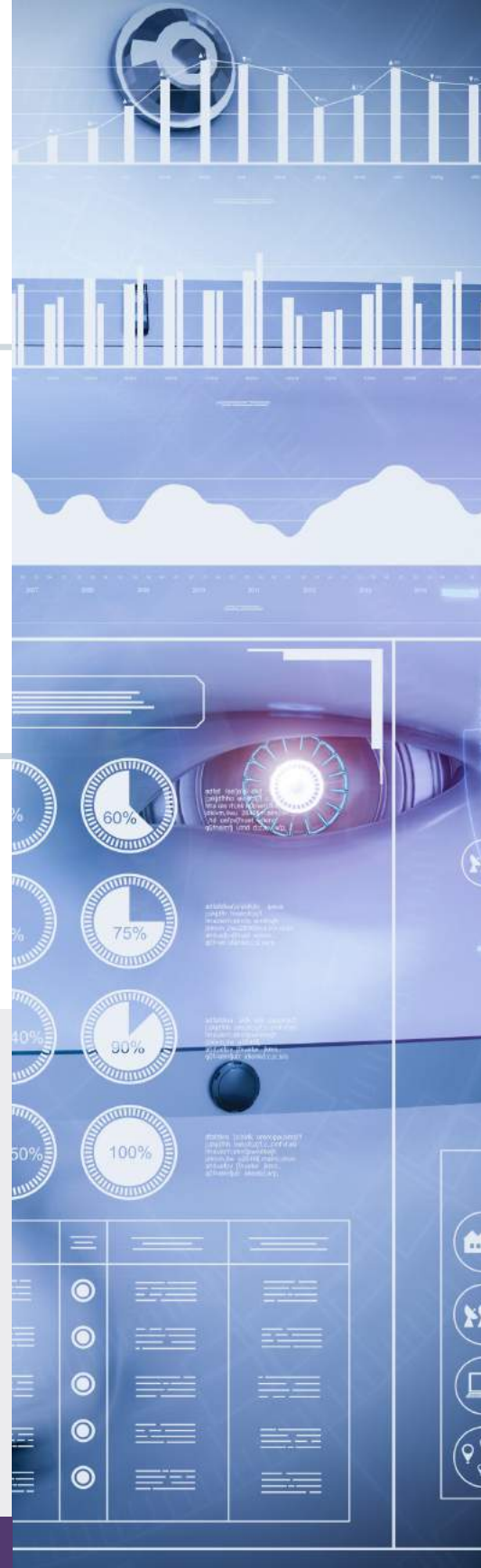
## ADVANTAGES



## WHO CAN BENEFIT

Working Professionals who would like to upskill their knowledge in artificial intelligence

Professional who would like their AI competence to be sharpened.







Johnson Pushpanathan  
Founder & CEO,  
FSI Infotech,  
AI Practitioner & Trainer

Mr Johnson Pushpanathan - Founder & CEO of FSI Infotech has over 28+ years of progressive IT experience in Fortune 500 and ISO 9000 companies specializing in Global Multi-Organizational, Multi-National Manufacturing, Sales and Financial Management Business System Implementations. He has over 15+ years of IT expertise in enterprise systems like ERP, CRM, SCM, PLM and over 10+ years of vast consulting & training experience in the field of Analytics/ BI/ DW and over 5+ years in the field of AI/ ML/ DL Tools.

Mr Johnson has created Machine Learning models using Python and R and extensively used Deep Learning frameworks – Google's Tensorflow and Facebook's Pytorch. He has provided Training on Machine Learning and Deep Learning using Pytorch and Tensorflow and mentored and trained team members on Machine Learning & Deep Learning. He has designed, built & customized Enterprise Data Warehouse (EDW) Data Models and Dimensional Models. Mr Johnson has also designed, created and Implemented EDW/ETL Adapters for Analytics modules from several sources like Oracle EBS, CRM, IBM Maximo, Custom Customer Built Systems and Big Data.

### PROGRAM FEES

INR 37,000 + 18% GST  
Early bird offer: 32,500 + 18% GST

### DETAILS

Batch size: 12- 24 participants  
Duration: 3 days

### CERTIFICATION

Applied Machine Learning & Deep Learning Professional Certification.

### MODES OF PAYMENT



Cheque/ DD : The payment can be made via a Cheque or DD in the favour of PRIN. L.N. WELINGKAR INSTITUTE OF MANAGEMENT DEVELOPMENT AND RESEARCH



Credit/ Debit Card: The payment can be made via Credit/ Debit card



Easypay details:

- Go to the portal: <https://easypay.icicibank.com>
- Enter mobile number registered with Welingkar
- Enter One Time Password received on your mobile & click Submit
- Find your bill/ invoice
- Tick the 'I agree & Accept' Button and click on 'Pay Now' Button



## CONNECT WITH US

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