

**iDEALABS**



**AI**

**APPLIED**

**AI & MACHINE LEARNING**

**FOR PROFESSIONALS**

BY INDUSTRY, FOR INDUSTRY

# IS DEMAND FOR AI/ML PROFESSIONALS JUST A HYPE?

Artificial Intelligence and Machine learning are undoubtedly amongst the most sought after skills and the demand for professionals in this area is growing at a phenomenal rate.

The statistics below give an indication:

# 74%

Growth in AIML Hiring

-Forbes

# #2

Emerging Job role in India

-LinkedIn

# 65%

Average salary hike in AI

-Economic Times



# ONE MORE AI PROGRAMME?

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Idealabs Applied AI/ML for professionals is an immersive, application oriented, real-world scenario-based programme in Artificial Intelligence & Machine Learning with a flexibility to choose and master a specific specialization.

It is also important to understand that the field is too vast and knowing all areas in a limited time is a challenge. We strongly believe in a focused approach and each of the AI/ML specializations needs an in-depth treatment. It does not help in having high level superficial awareness of terms.

## Salient features

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### FOCUSED APPROACH

One of the salient features of this programme is that it is modular and allows you to choose your area of specialization.



### BY INDUSTRY, FOR INDUSTRY

Co-designed and curated by Industry experts and is delivered by practitioners who have experience in solving real problems for clients globally.



### IMMERSIVE

All the sessions are delivered in a live interactive manner because we believe learning can be effective only when it is interactive in nature.



### GET REAL

Idealabs has forged partnerships with organizations across various industry segments to bring real case studies, datasets and domain experts.



### ACCELERATE YOUR CAREER

Get access to 100+ recruitment partners and give a headstart to your career or take our support to launch your own startup



### NETWORK WITH BEST IN CLASS

Get connected to an AI/ML community which includes Thought leaders, Corporates, Startups and Global ecosystems.

## Set High Expectations !

This Programme goes beyond typical programming aspects and shapes your thinking to formulate and solve real business problems using AI/ML

# PROGRAMME HIGHLIGHTS

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Modular – Choice of specialization



100% Live and immersive



27 x 7 lab access



Industry & domain experts networking



Industry practitioners as mentors



Hackathons



Placement opportunities



Personalized Assessment report



Case Study based approach



Client projects – Virtual Internships



Industry recognized Certification



Community Connect



**120+**

Hours of live  
immersive sessions



**24 X 7**

Cloud lab



**2**

Hackathons



**8**

Case studies

# SPECIALIZATIONS

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Machine Learning and Prediction with Regression and Time Series are the foundation blocks to build your career in the world of Machine learning and AI. Build a strong foundation!!!

## MACHINE LEARNING

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Machine Learning is the science of getting computers to learn and act like humans do, and improve their learning over time in autonomous fashion, by feeding them data and information in the form of observations and real-world interactions.

Machine learning is a set of powerful techniques to learn hidden patterns, predict and categorize objects based on various features without being explicitly programmed. This will dramatically enhance the ability to learn and adopt to new circumstances

Uber

Ride sharing apps use it to fix price of ride & reduce wait time



SPAM filters and smart replies in our Email Inbox



Estimating commute time by Google Map.



Credit decisions and fraud prevention in Banking

## PREDICTION WITH REGRESSION AND TIME SERIES

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Time series analysis is an area of specialization for analyzing data to forecast/predict values based on previously observed values in a given time horizon. Regression analysis is widely used for prediction and to infer causal relationships between the variables.

Regression comprises of modelling prediction using multiple variables and polynomials, Identifying significant features and regularization methods (Lasso, Ridge and Elastic nets). Time Series will cover smoothing, moving averages and auto-regression techniques. Some of the common usecases of Timeseries predictions are:



Sales, price and demand forecasting in sectors like Real Estate



Stock Market analysis, insights and predictions

Walmart \*

Generating insights on consumer behaviour in retail store like Walmart



The rise and fall of number of cases in a pandemic

# SPECIALIZATIONS

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Recommendation Engine and Natural Language Processing are the amongst the fastest growing sectors in Machine learning and AI space. Accelerate your career now!!!

## RECOMMENDER ENGINES

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A Recommender System is a process that seeks to predict user preferences. They recommend the most relevant items to a particular user or customer. It operates on the principle of finding patterns in consumer behavior data, which can be collected implicitly or explicitly.

This Specialization covers all the fundamental techniques in recommender systems, from non-personalized and project-association recommenders through content-based and collaborative filtering techniques, as well as advanced topics like matrix factorization, hybrid machine learning methods for recommender systems, and dimension reduction techniques for the user-product preference space.



Presents viewers with movie and show suggestions.



Choice of content on Facebook



Presents customers with product recommendations.



Shows trending Topics on Twitter based on your interest

## NATURAL LANGUAGE PROCESSING

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Natural Language Processing (NLP) is a branch of AI to extract useful information from text and voice data. NLP covers aspects related to understand and generate human's natural language.

NLP has areas including, speech recognition (text 2 speech, speech 2 text), statistical machine translation, Question & answering systems, information retrieval and extraction (extracting important objects and their relationships – Knowledge graphs), Topic detection and relevance (core algos in google search).



Chatbots for customer interaction



Sentiment Analysis on Twitter



Personal assistants such as google voice, Siri and Alexa



Search auto correct and auto complete on google

# SPECIALIZATIONS

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Computer Vision and Reinforcement Learning are amongst the most sophisticated areas of Machine Learning and AI. Learn from the best in class mentors drawn across the world!!!

## COMPUTER VISION

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Computer vision is a field of artificial intelligence that trains computers to interpret and understand the visual world. Using digital images from cameras and videos and deep learning models, machines can accurately identify and classify objects – and then react to what they “see.”

They are used for Image classification, Object detection and tracking, CV often uses deep neural networks and a variety of architectures including convolutional and Generative adversarial networks.



Snapchat and Facebook use face-detection algorithms to apply filters and recognize you in pictures.



Vision remains the main source of information to detect traffic signs and lights and other visual features.



Surveillance cameras are ubiquitous at public locations and are used to detect suspicious behaviors.



Image segmentation of scans to detect anomalies

## REINFORCEMENT LEARNING

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Reinforcement Learning is a field of AI that addresses modelling a set of decisions over time to achieve a desired goal. RL models the real-time decision making for intelligent agents like robots or autonomous cars and takes action in a dynamic environment to mimic human capabilities of perception and intelligence.

We will learn powerful techniques of Constraint Satisfaction Problems, Markov Decision Processes, Monte Carlo methods, Q-Learning



Reinforcement learning finds its application in Autonomous driving and parking



Robots in Automobile manufacturing and assembly units



Automatic Playing of games such as Chess, AlphaGo, checkers etc.,



Dynamic treatment regimes(DTRs) in chronic disease or ,automated medical diagnosis.

# MEET THE MENTORS

This programme has been co-designed and curated by industry experts and is delivered by practitioners who have experience in solving real problems for clients globally.



**RAM DAYAL GOYAL**

Chief Mentor - Idealabs

M.Tech from IIT Bombay | 25 Years of International consulting experience on AI/ML and Deep Learning | Six patents issued by United States Patent and Trademark Organization [USPTO]



**SURYA PUTCHALA**

Founder, - Zetta Mine Labs

M.Tech from IIT Kharagpur | 30 Years of Industry experience | Senior positions in Accenture, Cognizant and HCL | Founder of Hyderabad Data Science group



**ASHWIN SUGAVANAM**

DataScience leader - Infosys

20+ Years of work experience | Practice leader Data and Analytics at Infosys | Established a \$ 67 million practice across diverse sectors globally



**SHIVARAM K R**

Co-Founder and CEO - Curl Analytics

M.Tech from IIT Delhi | Serial entrepreneur | AI Architect | Worked as quant researcher in companies such as Societe Generale, Edelweiss Securities, and Bank of America



**CHANDRA DASARI**

Principal Consultant - Zetta Mines

PhD from University of Southampton | MS from IISC | More than a decade of International consulting experience in AI/ML and Deep Computing



**VINAY GUPTA**

Head Data Analytics Suzlon Global Services

Heading Data Analytics and Business Excellence at Suzlon | Headed Business Analytics and Strategy at Indian Army | Studied Digital Transformation at ISB

Do you realize the relevance of being mentored by industry practitioners, in a usecase driven model with practical insights rather than from people with only academic/theoretical knowledge.

# MEET THE MENTORS

All the sessions are delivered in a live interactive manner because we believe learning can be effective only when it is interactive in nature.



**KRISHNA ANUMALASETTY**

Principal Program Manager Lead - Microsoft

Masters from IIT Madras, Arizona state university | 30 years of experience with Microsoft and AT&T | Speaker at several International events such as O'Reilly conference



**MADAN DABBEERU**

CIO Rakuten

IIT Kanpur | 15+ years of experience in leading companies | Renowned Researcher in Robotics, Computer vision, Reinforcement learning and



**DURGA PRASAD PH.D**

Director, Legato Health Technologies

Director and Practice Head - Digital and Artificial Intelligence at Legato Health | CEO at Karvy Analytics | Worked at senior positions in Accenture, Oracle



**RAMESH SWAMINATHAN**

Director, Informatica

Director of Product Management at Informatica, Data Governance & Privacy | 20 years of Product management in companies such as CA Technologies, OPENTEXT, Virtusa



**VN RAJESH**

Head Data Analytics - Suzlon Global

Masters from IIM Bangalore | Overall 25+ years of experience | Advisor to Government of Tamil Nadu | Worked with Tech Mahindra, WIPRO



**ATUL TRIPATHI**

Principal Data Scientist, Tech Mahindra

20 years of Industry experience | Member - Leaders Excellence at Harvard Square | Worked at PMO | Advisor IISER Mohali | Worked as Senior Researcher at IIT Kanpur

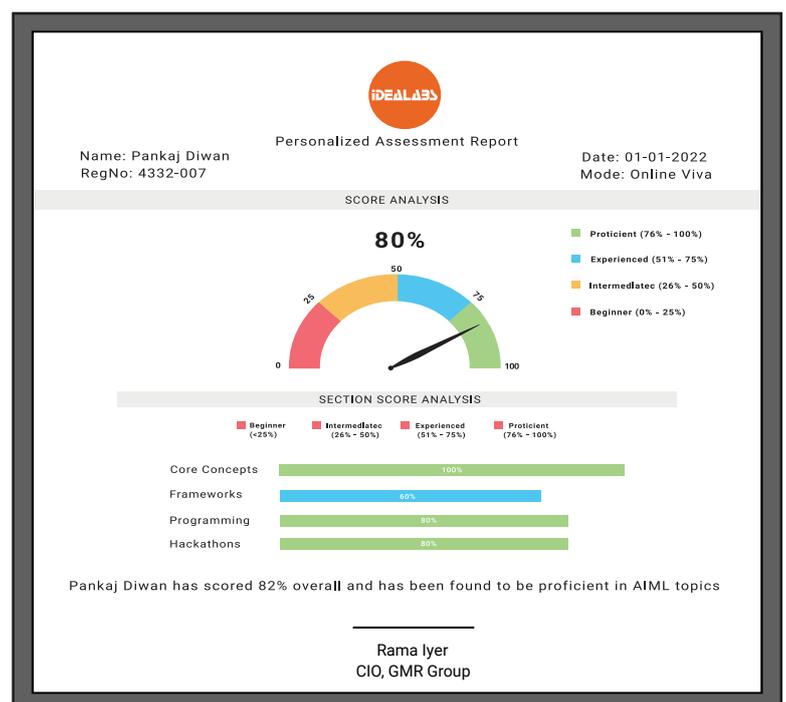
Do you want to miss the opportunity of being connected with best professionals in your field.

# CERTIFICATION

On successful completion of the programme, you will earn two certificates – A Certificate from Idealabs and a personalized assessment report by an industry mentor/Client on completion of a live project



## Personalised Assessment Report



# PARTNER ECOSYSTEM

Idealabs has tied up with a host of corporates and startups across various domains for case studies & internship opportunities. Participants will get an opportunity to work on live case studies.

## SourceTrace.



**Venkat Maroju,**  
CEO

At SourceTrace, we have built a digital platform for agriculture transformation and have several case studies which need application of AI/ML. We are happy to be associated with Idealabs and ready to share case studies with the programme participants

## DCB BANK



**Prasanna Lohar**  
CIO

We have identified more than 100 usecases in banking and fintech in emerging technologies like Blockchain and AI/ML. We have a team dedicated to work with external partners like Idealabs and building prototypes and taking them live on successful validation.



**Rama Iyer**  
CIO

As one of the most innovative Airport management company, we are constantly looking at new solutions. Idealabs partnership helps us in getting talented resources to work on our inhouse Proof of Concepts.



**Sanjeev Malhotra**  
CEO

NASSCOM CoE for AI works with several startups across India and our startups are always on the look out for Talent. We are creating a unique internship model with Idealabs to facilitate Idealabs programme participants to work with NASSCOM startups in AI/ML. This is a win-win model for both startups as well as participants



**Jayesh Ranjan**

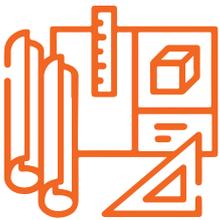
Principal Secretary, Information Technology  
Government of Telangana



The Government of Telangana is very keen on leveraging technologies like AI/ML for good governance. As a government, we have huge data sets and we are happy to share with Idealabs to help the participants build disruptive solutions for the common benefit

# POST PROGRAMME SUPPORT

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## Client Project - Virtual Internship

Idealabs has tied-up with several corporates and startups in different domains like E-commerce, Health, Agriculture etc. to avail case studies of AI/ML. The participants will get an opportunity to interact with the teams from these companies and work on their case studies. Working on real datasets will add a lot of value.

The Participants will also get a client certificate on successful completion of the project.

## Personalized Assessment Report

Every participant will get a personalized Assessment report by a senior Industry mentor from a reputed company. The personalized assessment report will be hosted on our website for future reference. This neutral assessment will serve as a testimony of your accomplishments.



## Placement Support

Idealabs is currently working with more than 100 companies for their recruitment needs. The participants who complete the programme successfully will get a plethora of opportunities and job interviews. The Placement support shall continue for one year after the programme. Further the career advisory cell at Idealabs will work with you on the following aspects to improve your placement prospects:

Resume reviews | Mock Interviews | Job referrals

## Incubation

There is lot of excitement for starting up a new venture. Idealabs is tied-up with several Incubators and Accelerators, startup enablers and Investment networks.

Any participant or team interested in starting-up will be incubated by Idealabs and get all the support in terms of Idea validation, mentoring, market access and funding opportunities.



## Community Connect

Learning is a continuous activity in new-age technologies like AI/ML. Being connected with the AI/ML community is one of the most recommended ways to have continuous learning and opportunities.

Idealabs is very well connected with the global ecosystem of AI/ML including professionals, industry leaders, corporates, startups and government initiatives.



## ABOUT US

Idealabs is India's fastest growing Innovation and upskilling company and works with policy makers, corporates & universities in providing solutions for upskilling on emerging technologies and promote product thinking, innovation, and entrepreneurship. Over the last two decades, Idealabs has helped more than one million students and professionals in their career acceleration.

Idealabs has been pioneering Innovation on emerging technologies for the last 20 years. The company has built the country's largest innovation ecosystem with more than 150 industry mentors, 100+ educational institutes, multiple start-up accelerators and incubation hubs. Idealabs has successfully concluded 190+ innovation & technology programs and incubated 50+ new product ideas



**Accelerate your career with us !**

APPLIED

# AI & MACHINE LEARNING

FOR PROFESSIONALS

## IDEALABS

Get the best value for your time, money and efforts! vis-a-vis knowledge gained and experience earned!



GET IN TOUCH



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