



Certification Program in

ARTIFICIAL INTELLIGENCE & MACHINE LEARNING

Course Duration: 8 Months



About Us

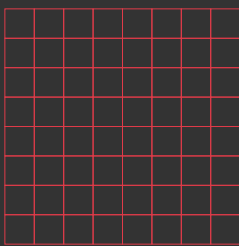
upGrad Campus is a
**video learning platform
for online education,**

with certificate courses specially curated for college students and young adults. As an affiliate of upGrad, India's largest online higher education company, upGrad Campus aims at making every graduate job-ready, with professional skills and practical know-how for the most sought-after fields of work.

“Our aim is simple: We strive to create high-impact, hands-on experiences that prepare learners for meaningful and productive careers.”

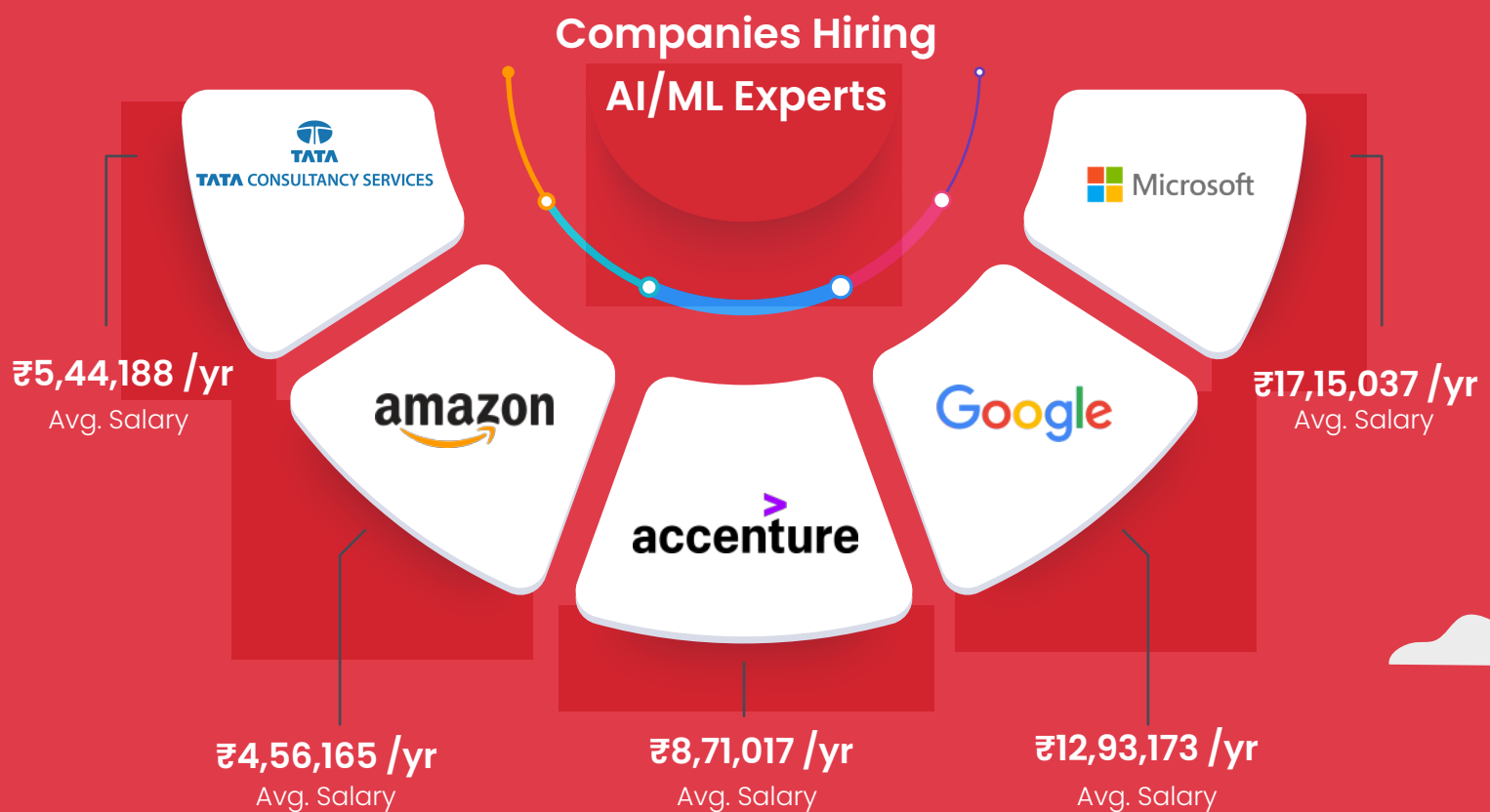
Ronnie Screwvala

Co-founder & Executive
Chairman, upGrad



AI & ML is the Skill of the Century!

Artificial Intelligence & Machine Learning is everywhere and so are the job openings. From the new startup on the block to a tech giant like Google, every company is on the lookout for AI/ML professionals to run their critical business functions.



Source: Glassdoor

Roles available to a certified AI/ML professional

Applied Machine Learning Engineer | Data Scientist | Data Analyst |
| Robotics Engineer | Robotics Scientist | AI Engineer

Roadmap to starting your career in AI/ML with upGrad Campus

Learn how to code in Python for cleaning and analysing of Data

Skills : Python for Data Science

1

Understand how data is stored and represented

Skills : SQL & Tableau

2

Grasp mathematical concepts used in Machine Learning Algorithms

Skills : Statistics & Linear Algebra

3

Learn how to build predictive models, predict trends and derive insights.

Skills : Supervised & Unsupervised Algorithms

4

Apply Machine Learning techniques to real-world business problems

Skills : Natural Language Processing & Deep Learning

5

Learn about Large Language Model (LLM) based generative AI

Skills : LLM architecture & AI powered models like ChatGPT

6



Artificial Intelligence & Machine Learning Certification Course

Best-in-class program by industry experts

Program Eligibility

This program is especially designed to teach AI ML for beginners. It covers everything starting from the very basics, including programming with Python. So a coding background is not compulsory (although knowing a coding language like Java, Python or C/C++ is an added bonus).

Top skills you will learn

Python programming, Machine Learning, Natural language processing, Deep learning and Python libraries including NumPy, Scikit Learn, Keras, Pandas, Matplotlib and many more!

Global Standard Curriculum

Our robust and beginner-friendly course will give you

400+ Hours of Learning Content Including

114+ Hours of Live Sessions

294+ Hours of Recorded Classes

Practical Learning

8 Projects

6 Case Studies



What sets this AI & Machine Learning course apart from others?



**Guaranteed
Certification**
by upGrad Campus



**Beginner Friendly
Course**
that covers all the
fundamentals of AIML



**Distinguished
Faculty**
with years of
industry experience



**Dedicated Student
Support**
from Teaching Assistants
Mentors and Peer groups



Live Classes on Weekends
to interact 1:1 with
industry experts
and TAs



**Job-ready
Projects**
based on real
world experience



Easy Doubt Resolution
through doubt-clearing
sessions and peer
support groups



Recorded Sessions
that you can access
content for up to
3 years



Crack Interviews
and impress
recruiters with your
AIML skills

Course Curriculum – I

Certification in Data Science & Analytics

01

Problem Solving Skills

- Introduction to Problem Solving
- Approach to Problem Solving
- Aids to Business Problem Solving



02

Data Toolkit

- Introduction to Python Programming
- Data Cleaning in Python
- Introduction to Kaggle
- Python for Data Analysis – Numpy, Pandas
- Python for Data Visualisation – Matplotlib, Seaborn



03

Introduction to SQL

- Database Design and Data Warehouse
- Data Modelling
- SQL Querying
- Joins and Set Operations
- Business Problem-solving using Data Modelling

04

Data Visualisation (Optional)

- Introduction to Data Analysis
- Creating and Formatting Charts
- Creating a Pivot Table
- Analysing Data in a Pivot Table
- Getting Started with Tableau
- Charts, Plots, Hierarchies
- Grouping and Tree-Maps
- Dashboard Creation
- Storytelling



05 Exploratory Data Analysis and Statistics

- Inferential Statistics
- Hypothesis testing
- Data Sourcing
- Data Cleaning
- Univariate Analysis
- Bivariate Analysis
- Derived Metrics

06 Machine Learning

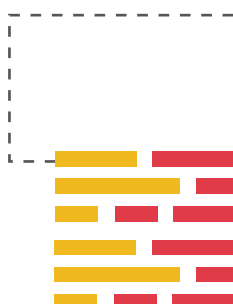
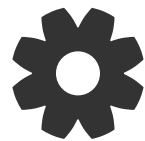
- Maths Essentials for ML (Optional)
- Linear Regression
- Logistic Regression
- Decision Trees
- Clustering

07 Business Understanding

- Data Storytelling and Effective Communication
- Business Problem Solving

08 Capstone Project

- Build a real-world marketing application model to predict whether a lead would be successfully converted or not



Course Curriculum – II

Certification in Artificial Intelligence & Machine Learning

09

Advanced Machine Learning

- Support Vector Machines
- Maximal Margin Classifier
- Soft Margin Classifier
- Kernels
- Decision Trees and Random Forests
- Algorithms for Decision Tree Construction

10

Natural Language Processing Fundamentals

- Introduction of NLP
- Industry Applications of NLP
- Regular Expressions
- Basic Lexical Processing
- Text Encoding
- Tokenization
- Stemming and Lemmatization

11

Deep Learning

- Structure of Neural Networks
- Backpropagation in Neural Networks
- Hyperparameter Tuning in Neural Networks
- Introduction to Convolutional Neural Networks
- Building CNNs with Python and Keras

12

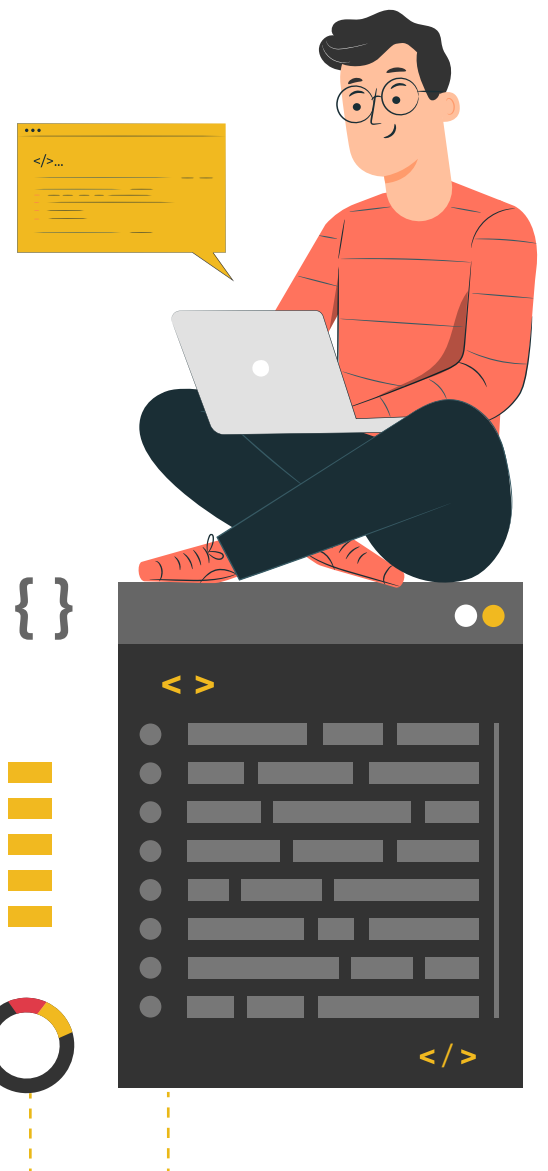
Advanced AI using ChatGPT

- Evolution of Language Models
- Recurrent Neural Networks
- Large Language Models
- Transformers and Pre-training
- Generative Models
- ChatGPT & Prompt Engineering

13

Capstone Project

- Implement a Multiclass Classification Model on Skin cancer dataset using a custom model in TensorFlow.



Tools & Platforms Covered



Python for Machine Learning

Learn Python from scratch and understand its use in linear regression, logistic regression, decision trees and more.



Data Visualisation with Tableau

Use Tableau Dashboard to make charts, treemaps, histograms and other elements for effective data storytelling.



Understanding Database with MySQL

Explore database design, data modelling, SQL querying, joins and set operations with MySQL.



Machine Learning Algorithms with Scikit-learn

Build powerful Regression, Clustering and Classification algorithms using this Python library.



Data Manipulation using Pandas

Make use of Pandas to perform powerful functions like indexing, slicing, grouping and pivoting data.



Deep Learning with Keras and Tensorflow

Learn how to train and compile Neural Networks using Keras and Tensorflow.



ChatGPT

Advanced AI with ChatGPT

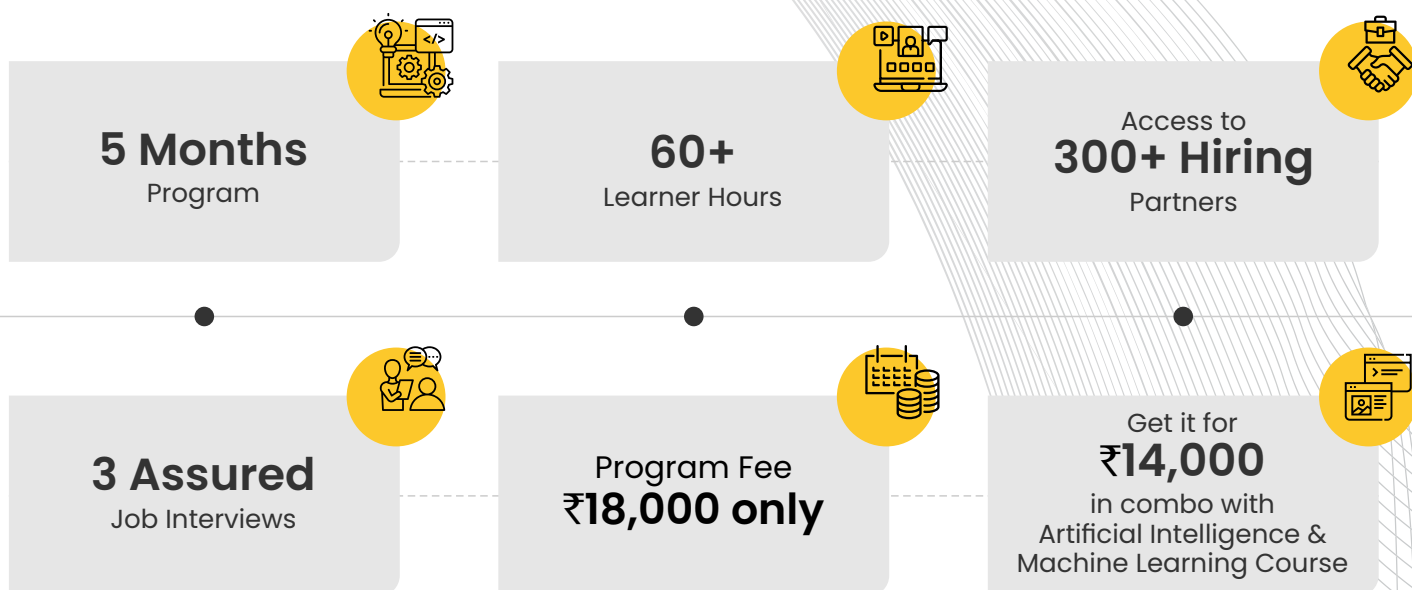
Get comfortable with Large Language Models like ChatGPT and learn to leverage ChatGPT, to build innovative AI powered products.



Get 3 Assured Job Interviews with Placement Plus

Become 100% Placement-ready with this Add-on Program

Get trained on aptitude and soft skills with Placement Plus – an add-on course designed to help you crack your interview and take you to your dream company.



5 Months of LIVE Training to Land Your Dream Job

- Resume Building
- Problem Solving & Logical Reasoning
- LinkedIn Profile Creation
- Public Speaking & Oral Communication
- Quantitative Training
- Non-verbal Communication
- Mock Interviews
- Group Discussions



Program Details

Course starts

**Please refer to the website
for program start dates**



Fee structure

~~₹ 80,000~~

₹ 65,000 (No additional taxes)

Duration

8 months



Program hours

**400+ Learning hours
Live Sessions every
weekend**

For admissions, contact

1800 210 7070

admissions.campus@upgrad.com

upGrad
Campus 

