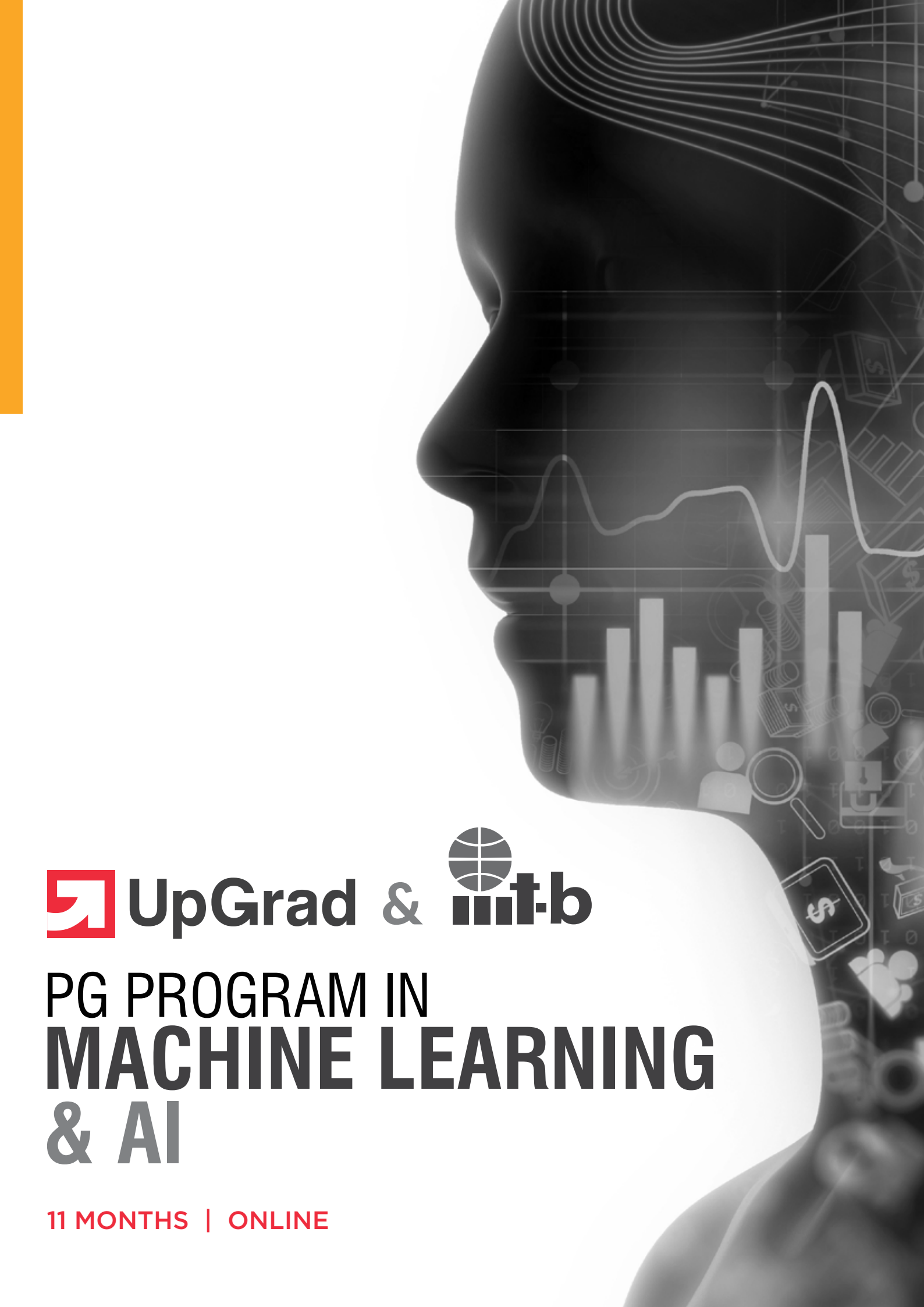

UpGrad & iit-b

PG PROGRAM IN MACHINE LEARNING & AI

11 MONTHS | ONLINE

UpGrad

UpGrad is an online education platform to help individuals develop their professional potential in the most engaging learning environment. Online education is a fundamental disruption that will have a far-reaching impact. At UpGrad, we are working towards transforming this online education wave into a tsunami! We are taking a full-stack approach of leveraging content, technology, marketing and services to offer quality education at scale in partnership with corporates & academics to offer a rigorous & industry relevant program.

The field of Data Science is maturing rapidly and demands professionals skilled not only in Statistics, but also in advanced concepts such as Natural Language Processing and Neural Networks. Our vision is to design and deliver a quality online Post-Graduate Program in Machine Learning/AI to produce top-notch Data Scientists and Machine Learning experts and help India capitalize the next wave of Artificial Intelligence. With UpGrad, we promise to equip you with the perfect mix of business acumen and technical capabilities to help you contribute to this technological revolution.

Ronnie Screwvala

Co-Founder
UpGrad

International Institute of Information Technology Bangalore

ज्ञानमुत्तमम्

IIIT-Bangalore is one of the leading institutes of higher education in the country and is a renowned name in the global analytics and IT industry. Our world-class faculty with years of teaching experience, have successfully worked with UpGrad to deliver quality online executive education in Data Science.

We are excited to partner with UpGrad yet again, to offer an academically rigorous and industry-relevant PG Program in Machine Learning and AI. IIIT-B's faculty will be covering the conceptual depths of topics such as Neural Networks, Deep Learning and NLP and this will be complemented by case studies from industry leaders from UpGrad's industry network. Further, our strong career support services, industry mentorship and the credibility of a PG Program will provide you just the right push to accelerate your career in Machine Learning and AI.

We invite you to take this opportunity and join us and make use of the excellent pedagogy and industry collaborations. You will truly be getting the best of both worlds, which will help you achieve success in the field of Machine Learning and AI.

Prof. S. Sadagopan

Director
IIIT-Bangalore

WHY MACHINE LEARNING & AI WITH UPGRAD & IIIT-B?

PG PROGRAM FROM IIIT-B

Earn a reputed Industry recognised PG Program without leaving your job

FOR THE INDUSTRY, BY THE INDUSTRY

Learn application through projects created in collaboration with industry

CUTTING EDGE CURRICULUM

Master advanced machine learning and artificial intelligence concepts

CAREER SUPPORT

Get 360 degree career support and get introduced to the right opportunities to upgrade yourself

ON-THE-GO LEARNING

Lectures squeezed into 30-minute learning sessions, anytime-anywhere

INDUSTRY MENTORSHIP

Receive 1:1 industry mentorship from ML and AI experts to guide you to your milestones

INSIGHTS FROM INDUSTRY EXPERTS

S. ANAND
CEO
Gramener

UJJYAINI MITRA
Head of Analytics
Viacom 18

HINDOL BASU
Partner
Tata IQ

KALPANA SUBBARAMAPPA
Ex-AVP, Decision Sciences
GENPACT

SAI ALLURI
PRO Analytics &
Strategy Manager
Uber

ANKIT JAIN
Data Scientist
Uber

RAJ ONKAR
Data Science Manager
Accenture

ANSHUMAN GUPTA, PHD
Director - Data Science
Pitney Bowes

CONCEPTS FROM TOP ACADEMICIANS

PROF. S. SADAGOPAN
Director
IIIT Bangalore

TRICHA ANJALI
Associate Professor
IIIT Bangalore

G SRINIVASARAGHAVAN
Professor
IIIT Bangalore

DINESH BABU JAYAGOPI
Assistant Professor
IIIT Bangalore

CHANDRASHEKAR RAMANATHAN
Dean (Academics)
IIIT Bangalore

SRINATH SRINIVASA
Dean (R&D)
IIIT Bangalore

PROGRAM CURRICULUM

Note: This curriculum is subject to change based on inputs from IIIT-B and Industry

PRE-PROGRAM PREPARATION

INTRODUCTION TO PYTHON
Get acquainted with Data Structures and Object Oriented Programming

INTRODUCTION TO SQL
Learn SQL for querying information from databases

MATH FOR DATA ANALYSIS
Brush up your knowledge of Linear Algebra, Matrices, Eigen Vectors and their application for Data Analysis

STATISTICS ESSENTIALS

PYTHON FOR DATA ANALYSIS
Learn how Python is used for Data Manipulation and Data Visualization

INFERENTIAL STATISTICS
Learn Probability Distribution Functions, Random Variables, Sampling Methods, Central Limit Theorem and more to draw inferences

HYPOTHESIS TESTING
Understand how to formulate and test hypotheses to solve business problems

EXPLORATORY DATA ANALYSIS
Learn how to summarize data and derive initial insights

MACHINE LEARNING

LINEAR REGRESSION
Learn to implement linear regression and predict continuous data values

NAIVE BAYES AND LOGISTIC REGRESSION
Understand how supervised learning is used for classification

CLUSTERING
Learn how to create segments based on similarities using K-Means and Hierarchical clustering

SUPPORT VECTOR MACHINES
Learn to classify data points using support vectors

DECISION TREES
Tree-based model that is simple and easy to use. Learn the fundamentals on how to implement them

NATURAL LANGUAGE PROCESSING

BASICS OF TEXT PROCESSING
Get started with the Natural language toolkit, learn the basics of text processing in python

LEXICAL PROCESSING
Learn to extract features from unstructured text and build machine learning models on text data

SYNTAX AND SEMANTICS
Conduct sentiment analysis, learn to parse English sentences and extract meaning from them

OTHER PROBLEMS IN TEXT ANALYTICS
Explore the applications of text analytics in new areas and various business domains

DEEP LEARNING & NEURAL NETWORKS

INFORMATION FLOW IN A NEURAL NETWORK
Understand the components and structure of artificial neural networks

TRAINING A NEURAL NETWORK
Learn the cutting-edge techniques used to train highly complex neural networks

CONVOLUTIONAL NEURAL NETWORKS
Use CNN's to solve complex image classification problems

RECURRENT NEURAL NETWORKS
Study LSTMs and RNN's applications in text analytics

CREATING AND DEPLOYING NETWORKS USING TENSORFLOW AND KERAS
Build and deploy your own deep neural networks on a website, learn to use tensorflow API and keras

GRAPHICAL MODELS

INTRODUCTION TO BAYESIAN METHODS
Understand basic concepts of Graphical Models

GRAPHICAL MODELS
Study probabilistic ways of modelling systems - Markov properties, Factor Graphs and Bayesian Belief Networks

LEARNING AND INFERENCE
Learn how Graphical Models are used for Supervised and Unsupervised Learning

REINFORCEMENT LEARNING

INTRODUCTION TO RL
Understand how machines can be programmed to learn by themselves

EXACT METHODS
Learn the math behind Exact Statistics - Dynamic Programming, Monte Carlo methods, Temporal Difference Learning

APPROXIMATE METHODS
Learn policy gradient methods and their applications in learning

PROGRAM DETAILS

PROGRAM STARTS

30th December 2018

**Preparatory sessions start on 10th of September*

WEEKLY COMMITMENT

10 hours per week

4-5 hours of asynchronous learning time
5-7 hours of assignments & projects
1 live session every 3 weeks

DURATION

11 Months

PROGRAM FEE

INR 2,85,000 (Incl. of all taxes)

Flexible Payment Options Available

ELIGIBILITY

Bachelor's/Master's degrees in Computer Science/Engineering/Math/Statistics/ Economics/Science with a minimum of 50% marks in graduation

SELECTION PROCESS

Candidates are expected to fill out an application form and then undergo a selection test to assess college-level mathematics and basic programming skill

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For further details, call us at +91-9136056345 or contact:

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Program Director
ai.upgrad@upgrad.com

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Worli, Mumbai – 400018