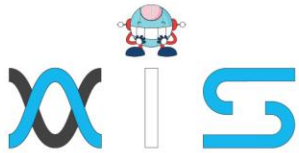


# Post Graduate Program in Ai & Machine Learning

University Program

Course Outline





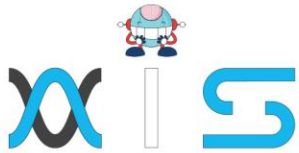
## Course Overview:

Artificial intelligence (AI) and machine learning are among the most sought after and highly compensated digital economy skills. Accelerate your career with our acclaimed Professional Certificate Program in AI and Machine Learning in collaboration with Purdue University and in collaboration with IBM. This program features the perfect mix of theory, case studies, and extensive hands-on practice in artificial intelligence education, leveraging Purdue's academic excellence and Simplilearn's partnership with IBM.

This post graduate program is a blend of self-paced online videos, live virtual classes, hands-on projects, and GPU-enabled labs. Mentorship sessions will provide you with a high-engagement learning experience and real-world applications, helping you master essential AI and machine learning skills. You will receive in-depth exposure to AI concepts and workflows, Python, machine learning, deep learning concepts using TensorFlow and Keras, computer vision, GANs, parallel and distributed computing using GPUs, and more. You will learn how to deploy deep learning models in various environments, such as Kubernetes and Docker, the basics of natural language processing (NLP), speech recognition, and deep reinforcement learning, which will prepare you for an exciting career in AI and machine learning.

## Key Features:

- Joint certificate from Purdue University and Simplilearn Eligible for Purdue Alumni Association Membership Industry-recognized IBM certificates for IBM courses
- 25+ hands on projects on integrated labs 8X higher live interaction with live online classes by industry experts
- Capstone project in 3 Domains
- Masterclasses from Top Purdue Faculty and Industry Experts at IBM
- Exclusive Mentoring Sessions and Hackathons by IBM
- Simplilearn Job Assistance with IIMJobs (India Only)
- Simplilearn Career Service from Talent Inc. (U.S only)



## About the Professional Certificate Program in AI and Machine Learning in collaboration with Purdue University

This Professional Certificate Program in AI And Machine Learning is in collaboration with Purdue University, one of the world's leading research and teaching institutions with over 150 years of academic excellence, offering higher education at its highest proven value. Committed to student success, Purdue is changing the student experience with a greater focus on faculty-student interaction and creative use of technology. This program is designed to prepare you to kickstart your career in Artificial Intelligence, Machine Learning, and Deep Learning. Upon successfully completing this program, you will:

- Receive a joint Simplilearn and Purdue certificate of completion
- Eligible for Purdue Alumni Association Membership

## Program Eligibility Criteria and Application Process:

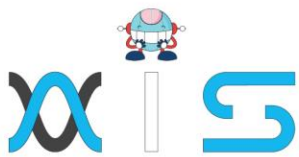
Those wishing to enroll in this Post Graduate Program in Ai & Machine Learning will be required to apply for admission to the program.

### Eligibility Criteria

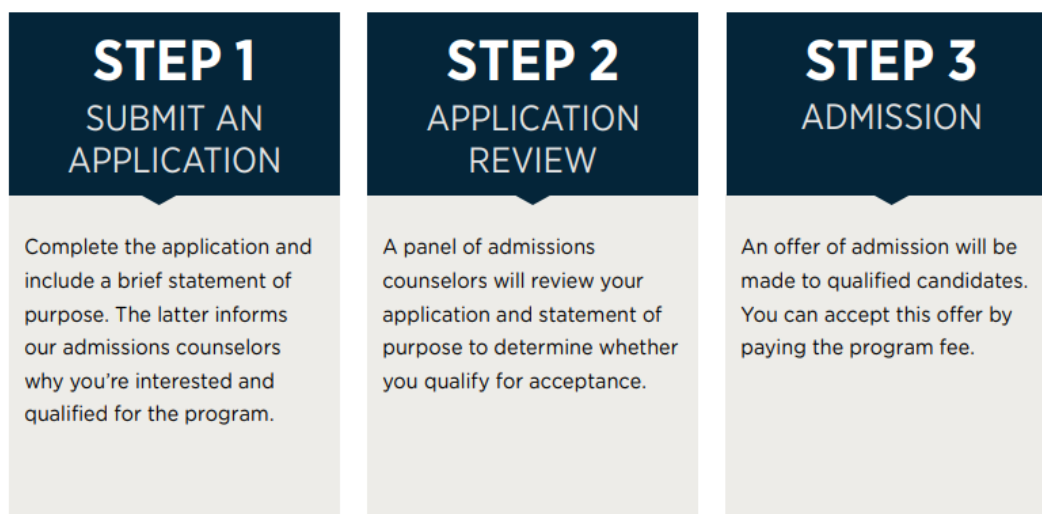
For admission to this Post Graduate Program in Project Management, candidates should have:

- A bachelor's degree with an average of 50% or higher marks
- Basic understanding of programming concepts and mathematics
- Working Professionals with 2+ years of experience are preferred to apply for this program

### Application Process



The application process consists of three simple steps. An offer of admission will be made to the selected candidates and accepted by the candidates by paying the admission fee.



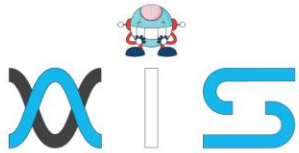
## Talk to an Admissions Counselor

We have a team of dedicated admissions counselors who are here to help guide you in applying to the program. They are available to:

- Address questions related to the application
- Assist with financial aid (if required)
- Help you resolve your questions and understand the program

## Program Outcomes:

- Understand the meaning, purpose, scope, stages, applications, and effects of AI
- Gain an in-depth understanding of data science processes, data wrangling, data exploration, data visualization, hypothesis building, and testing
- Perform scientific and technical computing using the SciPy package and its sub-packages, such as Integrate, Optimize, Statistics, IO, and Weave
- Gain expertise in mathematical computing using the NumPy and Scikit-Learn package

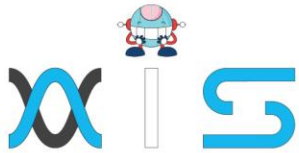


- Master the concepts of supervised and unsupervised learning, recommendation engine, and time series modeling
- Validate machine learning models and decode various accuracy metrics
- Master advanced topics, such as Keras and TensorFlow, elements of a Keras model, Keras on GPU, and more
- Build deep learning models on the cloud using AWS Sagemaker
- Implement deep learning algorithms, understand neural networks, and traverse the layers of data abstraction which will empower you to understand data like never before
- Learn deep learning techniques like object detection using computer vision
- Explore tools, such as Keras, to build computer vision applications
- Become familiar with generative-adversarial networks (GANs)
- Perform distributed and parallel computing using high-performance GPUs
- Deploy deep learning models with Flask/Django, Kubernetes, and serverless environments like Docker and SageMaker
- Learn about natural language understanding and natural language generation
- Understand the fundamentals of natural language processing (NLP) using the most popular library, Python's Natural Language Toolkit (NLTK)
- Understand how to apply machine learning and deep learning with NLP
- Understand the basics of speech recognition and do hands-on exercises
- Perform text-to-speech conversion with automated speech recognition. Work on voice-assistance devices and build Alexa skills
- Use Python and TensorFlow to understand reinforcement learning theory
- Learn how to solve reinforcement learning problems with a variety of strategies

## Who should enroll in this Program?

This program caters to working professionals from a variety of industries and backgrounds; the diversity of our students adds richness to class discussions and interactions. The Artificial Intelligence role requires a combination of experience, Data Science knowledge, and an understanding of the correct tools and technologies. AI is a solid career choice for both new and experienced professionals. Aspiring professionals looking for a career transition into AI and Machine Learning, who have basic programming skills and an analytical frame of mind, are most suited to pursue this Professional Certificate Program in AI and Machine Learning, including:

- IT professionals
- Software developers
- Data analysts



- Analytics managers
- Business analysts
- Data engineers

- Data scientists
- Beginners or

recent graduates  
with a bachelor's  
or master's degree

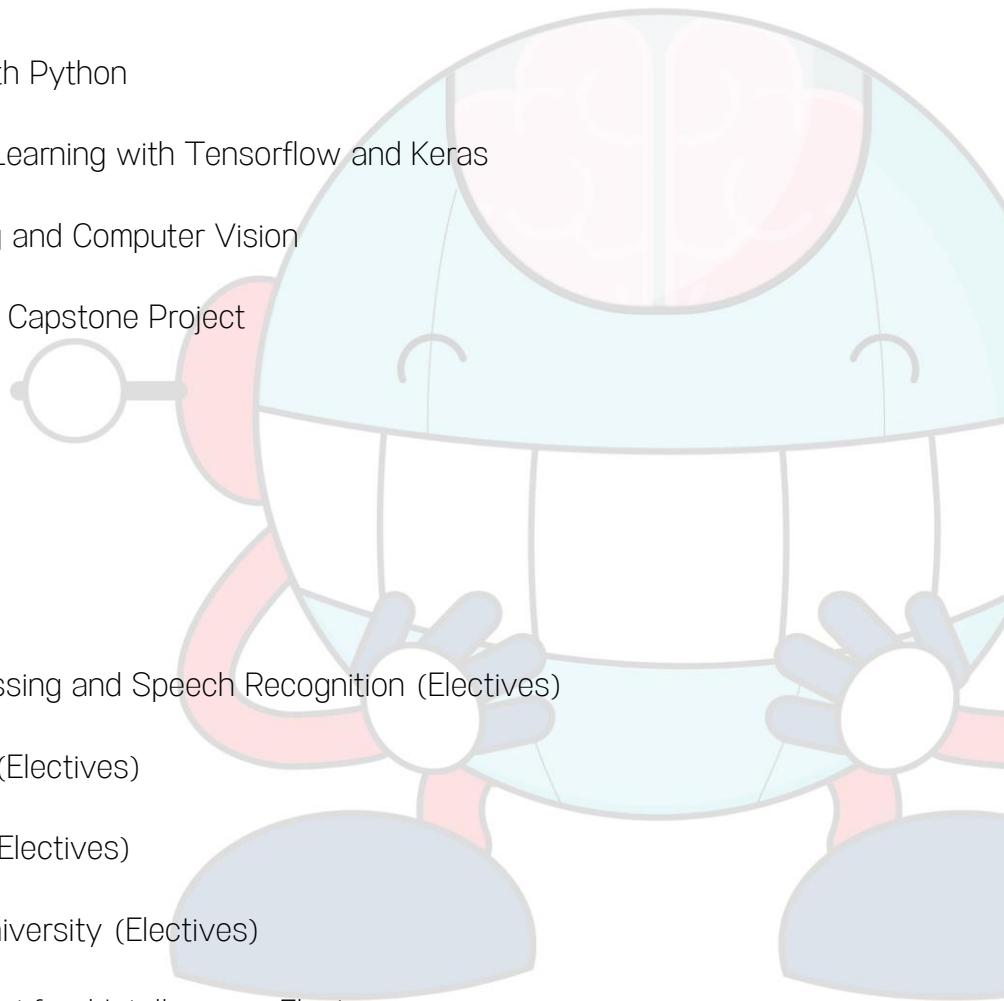
## Learning Path:

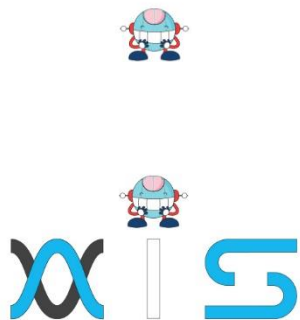
1. Python for Data Science
2. Applied Data Science with Python
3. Machine Learning Deep Learning with Tensorflow and Keras
4. Advanced Deep Learning and Computer Vision
5. AI and Machine Learning Capstone Project

(★) Master Certificate

## Electives:

1. Natural Language Processing and Speech Recognition (Electives)
2. Reinforcement Learning (Electives)
3. Git and Github Training (Electives)
4. Master class- Purdue University (Electives)
5. Industry Master Class- Artificial Intelligence (Electives)





## AIS

With the rising demand in scalable technology, AIS provides tailored goal-setting based on your organization's needs and expectations. With products geared towards the growing needs of your organization's customers and employees, AIS has innovative and value-driven solutions.

### Learning Partners



#### SAS Management, Inc.

SAS Management, Inc. has been a leader in the training, certification and consulting services industry in the Philippines. With offices in Makati, Ortigas and Cebu, Philippines, the company has been the top training and consulting company for over 9 years. In its years of existence, it has provided certificates to over 100,000 professionals including 10,000 participants in the 160+ courses that have been conducted just during the 2020-2021 pandemic alone. The most sought-after courses being offered are ITIL, Project Management Professional (PMP)®, COBIT 5, Six Sigma Yellow Belt, Six Sigma Green Belt, PRINCE2, and organizational skills, among others.



#### Simplilearn

Simplilearn, based in California and India, is the world's #1 online bootcamp and one of the world's the leading certification and training providers. Simplilearn trained over 2,000,000 professionals with 2,000+ trainers and provides over 400 different courses.

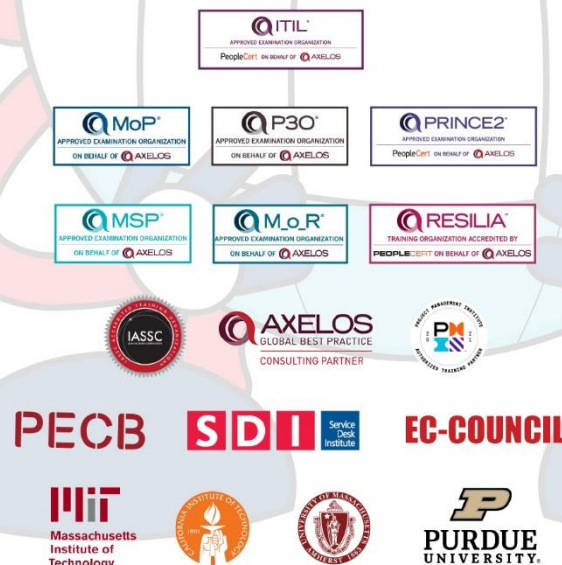
### Technology Partner

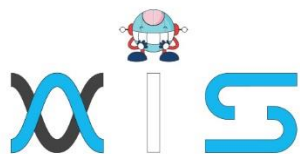


#### Freshworks

With over 40,000 customers, Freshworks is a business solutions software provider with products ranging from IT helpdesk and service desk, customer relationship management, live chat, marketing automation, phone system, and HR.

### Partners & Affiliates





*The program presented, as well as a wide range of programs are products of the partnership of AIS, SAS Management, Inc., and Simplilearn. With a common goal of providing the best practice of facilitating learning with an array of choices available in the online platform in this time of digitization.*

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