भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad

Programming for AI

Course Code: AI1013

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12 February 2026

What to Expect?

- Hands-on implementation of popular machine learning algorithms on Python
- Data analysis + data visualisation in Python
- Modules on neural networks and deep learning (PyTorch + TensorFlow)

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- **New this year:**   Hands-on module on building a chatbot from scratch

Schema for Grading

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Homework Assignments (5)	70%
In-Class Presentation	20%

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- Dates of presentation: 04, 05 **May** 2026   (schedule TBD)

Course Outline

Data Visualisation Data Analysis	ML basics Neural Networks Deep Learning	Industry Lecture Naresh Shah, Mindgraph Technologies Pvt. Ltd.		Industry Lecture Dr. Easwar Subramanian TCS Research
		Building your Personal Chatbot	Probability & Optimization	Reinforcement Learning
NumPy	Training	NLP	Sampling	Tic-Tac-Toe
Pandas	Backprop	Tokenisation	Law of large numbers	Minmax player
Matplotlib	PyTorch	Response Generation	Minmax optimization	Greedy Algorithms
Seaborn	MLP	RLHF	CVXPY	Reward Maximization
Scipy	MNIST			

The Team

Name	Email	Office Hours
Karthik P. N. (instructor)	pnkarthik@ai.iith.ac.in	Upon appointment
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