



National Institute of Electronics & Information
Technology Near IIT Patna, Amhara, Bihta,
Patna(Bihar) -801106

Details of the Course

Name of The Course: Industrial training and internship in Artificial Intelligence(AI)

Duration (in Hrs.): 60(6 weeks)

Fee (in Rs.): Rs 2974/-

Eligibility: Diploma/B.Sc./B.Tech/ In Electronics, Electrical, Instrumentation Engineering, Computer Science, IT or its equivalent/BCA/MCA. (Completed or Pursuing).

Prerequisite: Knowledge of basics Python programming and Python packages for Machine Learning

Course Content:

Sl .No	Topic	Subtopic	Duration(in Hrs)
1	Fundamentals of AI & Machine Learning	Introduction to machine learning and AI, AI Terminology, The Necessity of Learning AI, Goals and applications of AI, AI issues, concerns and Ethical AI, AI future, Generative AI, Prompt Engineering	10
2	Statistics for AI	Basics of Statistics, Statistics, and Its types, Numerical and Categorical data, Descriptive Statistics, Qualitative and Quantitative Data, Measure of Central Tendency (Mean, Median and Mode), Measure of Positions (Quartiles, Deciles, Percentiles and Quantiles), Measure of Dispersion (Range, Median, Absolute deviation about median, Variance and Standard deviation, Z-score, Covariance, Correlation Coefficient, Measure of Distribution (Skewness and Kurtosis)	10
3	Machine learning	Data Preparation, Dataset, Data Preprocessing, Outlier detection, Missing value imputation, Encoding, Categorical Data, Splitting Data, Feature scaling Introduction to	10
		Supervised Learning, Unsupervised learning, , Regression and Classification, Regression Algorithms Simple Linear Regression, Decision Tree, Classification Algorithms, Logistic Regression, KNN, Clustering	

4	Deep Learning	Neurons, Neural Networks, Activation Functions & their Types, Gradient Descent, Backpropagation, Artificial neural networks, Convolutional Neural Networks, Image classification, Text classification	10
5	Computer Vision	Computer Vision, Installing Useful Packages, OpenCV, Reading, Writing, and Displaying an Image, Preprocessing and Image analysis, Colour Space Conversion, Image Thresholding, Object Detection, Image Segmentation, Face Detection, Eye Detection, Deep Learning for computer vision, YOLO	10
6	Natural Language Processing	Natural Language, Natural Language Processing - Problems and perspectives, Corpus, Text Analytics, Tokenisation and Sentence splitting, Stemming, Lemmatization, Feature Extraction, Sentence Segmentation, NLTK, Text Classification, Semantics and Sentiment Analysis, Deep Learning for NLP	10