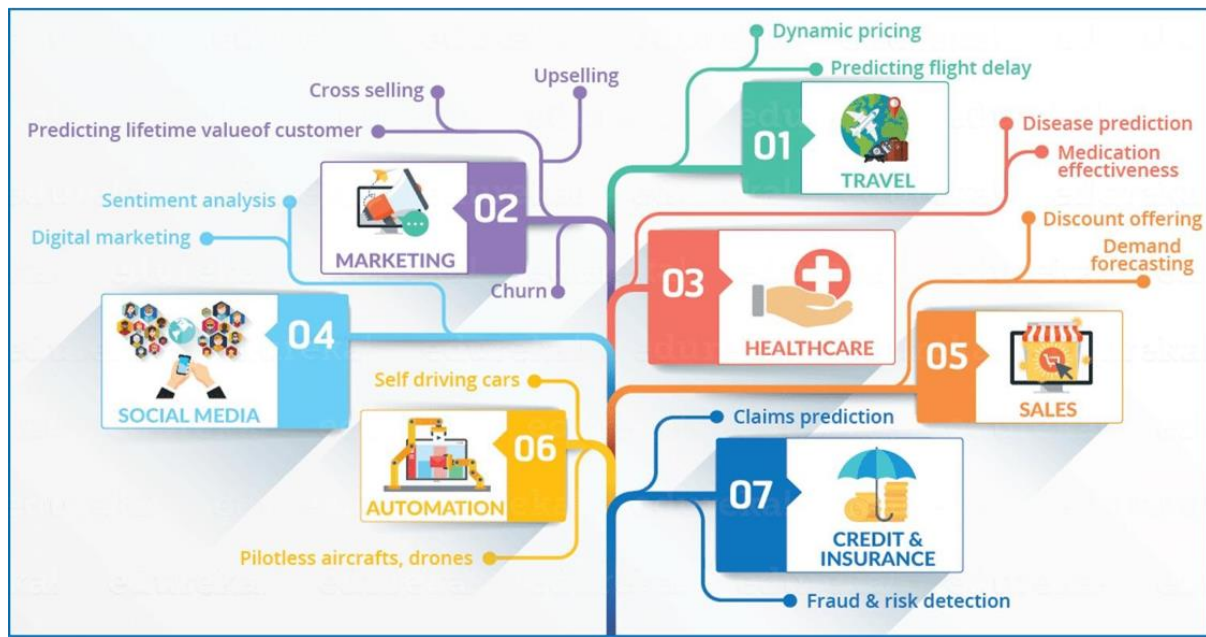


Artificial Intelligent Specialization

Focused Job Preparation



Why Choose Eiconik Academy?

- International Faculty
- Online Live Interactive Class
- Industrial Experts
- Project Oriented Class
- Job Oriented Training
- Priority Basis Intern Facilities
- Freelancing Support
- 5 Months Course
- 4 Project
- 2 Mock Interviews

Course Module Python

-  Module 1 – Dev Environment Setup
-  Module 2 – Python Core
-  Module 3 – Python Functions
-  Module 4 – Python Object-Oriented Programming
-  Module 5 – Modules and Packages
-  Module 6 – File Handling – TXT, JSON, CSV
-  Module 7 – Folder and Datetime Handling
-  Module 8 – Exception Handling
-  Module 9 – Interacting with Web - Requests
-  Module 10 – Web Scraping - BeautifulSoup
-  Module 11 – Web Crawling - Scrapy
-  Capstone Project

Detailed Outline ML & DS

Module 1 – Applied Statistics

- Descriptive Stats
- Inferential Stats

Module 2 – Applied Probability

- Key Concepts
- Probability Formulas
- Conditional Probability
- Bayes Theorem

Module 3 – Scientific Computing

- N-Dimensional Array Computation - NumPy
- Scientific Computation – SciPy

Module 4 – Data Visualization

- Matplotlib

Module 5 – SQL for Data Science

- MySQL Setup
- Database
- Tables
- Constrains
- Query and Nested Queries
- Joins
- Views

Module 6 – Data Science

- Pandas – Series
- Pandas – DataFrame
- Pandas - Data Cleaning & Pre-processing
- Exploratory Data Analysis – Pandas and Seaborn

Module 7 – Machine Learning – Supervised Modelling

- Linear Regression – Regression
- Stochastic Gradient Descent – Regression & Classification
- Logistic Regression – Classification
- Support Vector Machine - Regression & Classification
- Naïve Bayes - Regression & Classification
- K Nearest Neighbors - Regression & Classification
- Decision Tree - Regression & Classification
- Multilayer Perceptron - Regression & Classification

Module 8 – Machine Learning – Ensemble Learning

- **Bagging**
 - Random Forest - Regression & Classification
- **Boosting**
 - AdaBoost - Regression & Classification

Capstone Project 1 –

- Time Series - Stock Market Prediction (Data)

Module 9 – Machine Learning – Unsupervised Modelling

- **Clustering**
 - K Means
 - Hierarchical
 - DBSCAN
- **Dimensionality Reduction-**
 - Principle Component Analysis

Career Guidance – Freelancing (Upwork) and LinkedIn

Module 10 – Image Processing

- Image – Loading, manipulation, and Saving
- Transformation – Resizing, Rescaling, Rotation
- Colour and Exposure Transformation
- Feature Extraction – HOG

Capstone Project 2 –

- Crop Disease Prediction (image)

Module 11 – Natural Language Processing

- NLTK
- Tokenization
- Stop Words
- Stemming
- Lemmatization
- Vectorization

Capstone Project 3 – Sentiment Analysis (Text)

Module 12 – Deploying Models with Flask

2 Mock Interviews

Course Module Deep Learning & NLP

Module 1 – Idea of Artificial Intelligence

Module 2 – Idea of Deep Learning

- Idea of Neural Networks
- Perceptron
- Training Neural Network
- Activation Function
- Understanding Derivatives
- Forward Propagation
- Backpropagation
- Computing Loss
- Gradient Descent
- Regularization
- Optimization
- Shallow vs Deep Neural Network

Module 3 – TensorFlow

- Building Shallow Neural Network
- Regression with TensorFlow
- Classification with TensorFlow
- Building Deep Neural Network
- Saving and Loading Model

Capstone Project 1 – Classification + Regression

Career – Freelancing (Upwork) + LinkedIn + Kaggle

Module 4 – Introduction to Computer Vision

- **Working with OpenCV**
- **Image Load and Save**
- **Image Representation as Matrix**
- **Image Transformations -**
 - **Colour**
 - **Shape**
 - **Scale**
 - **Rotation**
 - **Contrast**
 - **Brightness**
 - **Blur**

Module 5 – Convolutional Neural Network (CNN)

- **CNN with TensorFlow**
- **Multiclass Image Classification**
- **Capstone Project 2 – Skin Cancer Detection**

Module 6 – Sequence Modelling

- **Recurrent Neural Network**
- **Long Short-Term Memory**
- **Gated Recurrent Unit**

Module 7 – Natural Language Processing

- **Tokenization**

- **Stop Words Filtering**
- **Stemming**
- **Lemmatization**
- **Tagging POS**
- **Chunking and Chinking**
- **Dispersion Plot and Frequency Plot**
- **Named Entity Recognition**
- **Word Embedding**

 **Capstone Project 20 – Twitter Sentiment Analysis (Text)**

 **Capstone Project 4 – Fake News Detection (Text)**

 **Module 8 – Deploying Models with Flask**

 **2 Mock Interviews**

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