



# INDUSTRIAL DATA SCIENCE WITH PYTHON

**Course fee**  
25,000 Bdt/Inr

**Registration fee**  
3000 Bdt/Inr

Financial facility and installment aid available

**Course duration**  
2.5 Months training + 20 days final project

## ENROLL NOW

Contact us  
[www.softanbees.com](http://www.softanbees.com)



NumPy Pandas



matplotlib



plotly



# MODULE 1

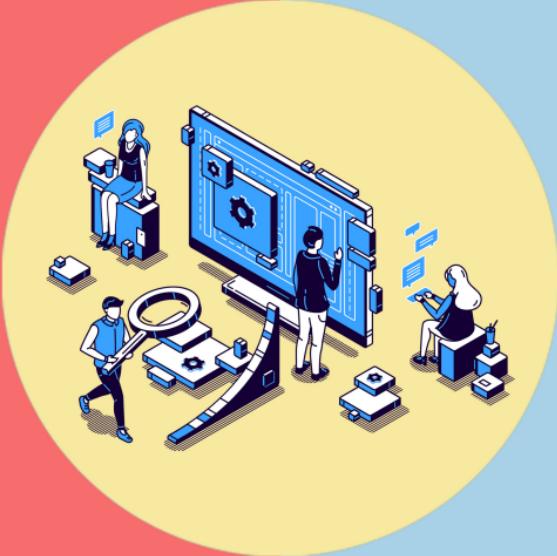
# INDUSTRIAL DATA SCIENCE 101

"Creating the backbone by learning the theories"

WEEK 1

## TAKEAWAYS

1. What is Data Science and details on the data science lifecycle.
2. Breaking the Myths.
3. How you can add value through data science.
4. Key tools and technologies are being adopted by the industries.
5. Learn in-depth about the industrial data science process.



## KEY EXERCISES

1. Get your hands dirty for the first time with real-life survey data.
2. Play with Excel and do some statistical analysis.
3. Get to know the whole process of data science by doing.
4. Learn how to measure the quality of data.



# MODULE 2

# LEARN THE LANGUAGE

"To win a war, we need to master how to utilize your own weapon efficiently"

## TAKEAWAYS

1. Introduction to Python.
2. Data Structure using Python – In the problem-solving method.
3. Learn to create functions.
4. Object-Oriented Programming using Python.
5. Learn Numerical analysis using NumPy.



## KEY EXERCISES

1. Learn python not by theory but by solving problems.
2. Learn to play with python data structure.
3. Exercise industrial format functional programming approach.
4. Production grade OOP programming approach.
5. Mathematical Analysis and foundation building using NumPy.

# MODULE 3

## CORE STATISTICS FOR DATA SCIENCE

"Statistics is the backbone of Data Science"

### TAKEAWAYS

1. Different types of distributions.
2. Probability Distributions.
3. Testing Hypotheses: One-Sample and two-sample tests.
4. Chi-Square and Analysis of Variance.
5. Correlation and ANOVA.



### KEY EXERCISES

1. Refresh what you have learned in the textbook.
2. Implement the statistical theories in python.
3. Learn to make decisions using statistics.
4. Advance level understanding for improving your core knowledge of data science.

# MODULE 4

## EXPLORATORY DATA ANALYSIS (EDA)

"The clever Ingredient that decides the rise and fall of your Machine Learning model"

### TAKEAWAYS

1. Fundamentals behind Exploratory Data Analysis (EDA).
2. EDA using Pandas library.
3. How to check if our data is good enough for a model.
4. Generate insights from the data.
5. Descriptive Analysis using NumPy, Pandas.
6. Learn Data Cleaning, imputation by using automated tools.



### KEY EXERCISES

1. Practice your skills on real-time survey dataset.
2. Learn to gain industrial standard data cleaning methods by doing.
3. Build resume standard skills on Pandas and EDA.
4. Learn to use the Scikit-learn package to automate your data cleaning process.
5. Learn how to create methods that will efficiently clean your data.

# MODULE 5

## DATA VISUALIZATION

"Your visualization will create value only when it can tell the story by itself"

### TAKEAWAYS

1. How to tell a story by visualizing your data.
2. Learn to use data visualization tools like Matplotlib, Seaborn, Plotly.
3. Learn to create an interactive visualization.
4. Learn how industries create a visualization with efficiently (OOP and functional methods).
5. Combining EDA skills with visualization.



### KEY EXERCISES

1. Learn the key factors behind a good and great visualization by practice.
2. Learn EDA and visualization skills by working on projects.
3. Do resume standard EDA project with real-life industrial data.
4. Learn OOP methods and functional programming strategy to create an effective visualization.



# MODULE 6

## FEATURE ENGINEERING

"A bad feature is more damaging than having a bad model"

### TAKEAWAYS

1. How to select the best features and what skills do you need.
2. Categorical Encoding – for converting your categorical data into an effective model.
3. Learn how to handle outliers.
4. Log transformation.
5. Different forms of scaling methods.
6. Learn PCA (Principal Component Analysis) – Theory and Practical.



### KEY EXERCISES

1. Do feature engineering in raw data of Softanbees's Student Database..
2. Learn when to use which methods by working on real-time projects.
3. Learn from the veterans what to do and what not to during feature Engineering.
4. How to create an end to end pipeline for getting the highest output from a generic model.



# MODULE 7

## THE MODELLING (THEORY)

"An efficient model can change a whole civilization"

### TAKEAWAYS

1. Learn the art of model selection.
2. The mathematical concept of Regression (Linear, Logistics, and polynomial).
3. The core of classification algorithms (Logistics, SVM, Decision Tree, And Random Forest).
4. Learn the mathematics behind the models ( A very brief discussion so that you can understand the tough calculation written in research papers).



# EXERCISES

WEEK 8

### KEY EXERCISES

1. Learn by analyzing several research papers.
2. Practice model selection manually to understand in depth what is happening behind the picture.
3. Learn how to utilize research papers in production scenario as well.
4. A demo of our own R&D project (Industrial Research and Development Project).



# MODULE 8

## THE MODELLING (PRACTICAL)

"The only Source of Knowledge is Experience"

### TAKEAWAYS

1. Learn Scikit-Learn Package for model implementation.
2. Implement the model that we have learned in theories.
3. Learn to implement a theoretical model into practical.
4. Learn how to measure the success of a model.
5. An end to end machine learning project implementation (Till modeling).



### KEY EXERCISES

1. Learn by implementing models in several datasets.
2. Expert one-to-one mentoring to understand the industrial level implementation of models.
3. Understand the model metrics and hands-on experience on selecting the best model.
4. Learn to tune a model using several libraries.



# MODULE 9

## DEPLOYMENT (PRACTICAL)

"You can not say your machine learning working without deploying it"

### TAKEAWAYS

1. Learn to create flask API for deploying machine learning project.
2. Learn the operations related to real-time deployment.
3. Learn to use data warehousing technique in the ML operations.
4. Django Basics to deploy a machine learning model.



### KEY EXERCISES

1. Key metrics to measure the model during deployment.
2. Deploy a real-life machine learning model using flask API.
3. Create your own ML application using Django.
4. Hands-on learning on end to end machine learning application development.

# CAPSTONE PROJECT

(Resume standard Project)

Project Duration: 20 days

## PROJECT DESCRIPTION

In the project, you will have to implement all the concepts that we have learned in the training program and maintaining industry acceptable format of documentation. You will have to build an end-to-end machine learning model to solve a real-life Industrial problem. Proper guidance and mentorship will be provided by the trainers of Softanbees during the project.

## TECHNOLOGY STACK



## The company that is providing the data:



This course has helped me a lot to understand what data science is and how to think like a data scientist. I also learned why we need to understand data with remarkable guidelines. Every concept was covered extensively, with examples and guidelines on how to implement them. The mentors were superbly helpful with immense knowledge of the industry and their subject matter. This course has put me on a course to implement data knowledge in my career and personal life.....

- Mashiat Amin Farin  
Intern @ Softanbees  
Dhaka University



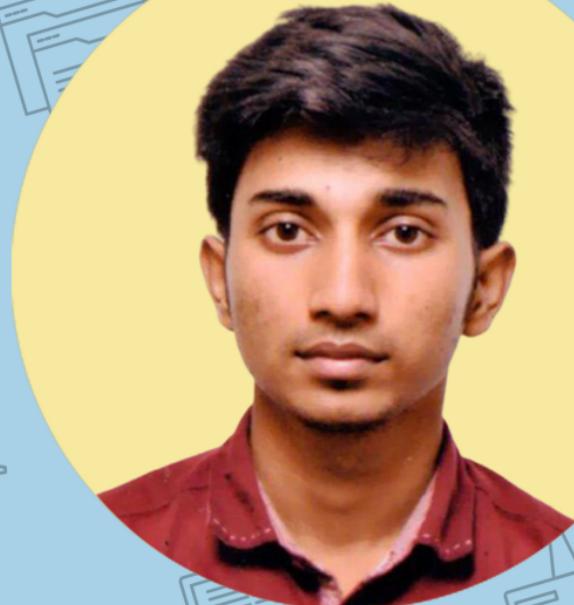
The training program was like a first step towards achieving my dream of becoming a data scientist. The whole course was designed in a way that a beginner like me also understood each and every concept and the guidelines of the trainers and their superb support helped me finish the training session, also successfully entered the paid internship program. Thank you once again softanbees for the chance.....

– Tamanna Binte Akbar  
Intern @ Softanbees  
Daffodil University



I joined the Softanbees Technologies Private Limited training program back in December 2020. After Joining the program, I learned a plethora of topics that I did not understand earlier. All of the trainers are outstanding and have industrial and academic experience. Their edification helped me a lot for being a better Data science enthusiasm. They monitored me constantly about my progress and Finally for my outstanding progress and did an outstanding final project. As a result, I have been selected as an intern for Softanbees. Now I am very excited to work with them and learn more creative and analytical skills from industrial and academic experts.....

– Mamudul Islam  
Intern @ Softanbees  
Daffodil University



It was a great journey with softanbees. Training period was well designed with the topic we were taught. The way they explained the concept and the follow up classes were the best. The project we were assigned was also research based and helped the students to handle that analytical problems. Looking forward to have a great journey in my internship period....

- Paulomi Das  
Intern @ Softanbees  
University of Calcutta

PAULOMI



# CONTACT US

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