



JAIN
DEEMED-TO-BE UNIVERSITY

FACULTY OF
ENGINEERING
AND TECHNOLOGY

SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

Academic Year 2022-23

INTERNSHIP REPORT

On

Data Science and Machine Learning

Submitted in partial fulfilment of academic session in under graduate program of

BACHELOR OF TECHNOLOGY

In

COMPUTER SCIENCE ENGINEERING-DATA SCIENCE

Submitted by

Chandon Kumar Roy Dipu
21BTRCD057

Under the guidance of

GUIDE NAME

Designation

School of Computer Science Engineering-Branch name

Faculty of Engineering & Technology

JAIN (Deemed-to-be UNIVERSITY)



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FACULTY OF
ENGINEERING
AND TECHNOLOGY

**DEPARTMENT OF COMPUTER SCIENCE ENGINEERING-
SOFTWARE ENGINEERING**

CERTIFICATE

This is to certify that the “**Internship report**” submitted by **Prabal Dhar(USN: 21BTRCD056)** is the work done by he/her and submitted during 2022 – 2023 academic year, in partial fulfilment of the requirements for the award of the degree of Bachelor of Technology in Computer Science Engineering-Software Engineering, Faculty of Engineering & Technology, JAIN (Deemed-to-be University) , at **YBI Foundation**

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Engineering-Data Science ,
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Date:

Internship Coordinator Name

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Date:

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Department of Computer Science
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Date:



CERTIFICATE OF INTERNSHIP

presented to

Chandon Kumar Roy Dipu

has successfully completed one month Data Science and Machine
Learning Internship on Monday, Jul 24 2023 at Ybi Foundation

Certificate ID: 14364000006051632



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ACKNOWLEDGEMENT

It is a great pleasure for us to acknowledge the assistance and support of a large number of individuals who have been responsible for the successful completion of this project work.

*First, we take this opportunity to express our sincere gratitude to **Faculty of Engineering & Technology, JAIN (Deemed-to-be University)** for providing us with a great opportunity to pursue our Bachelor's Degree in this institution.*

*In particular we would like to thank **Dr. Geetha G., Director, School of Computer Science Engineering, JAIN (Deemed to be UNIVERSITY)** for her constant encouragement and expert advice.*

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*We would like to thank our guide **Guide Name, Assistant/Associate Professor, Department of Computer Science Engineering-Software Engineering, JAIN (Deemed-to-be University)**, for sparing his valuable time to extend help in every step of our project work, which paved the way for smooth progress and fruitful culmination of the project.*

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We are also grateful to our family and friends who provided us with every requirement throughout the course.

We would like to thank one and all who directly or indirectly helped us in completing the project work successfully.

Signature of Students

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CHAPTER 01:

INTRODUCTION

The Data Science and Machine Learning using the Python to acquire, clean, and analyze the data using the powerful machine learning model and python libraries.

In this internship, I was introduced to the Google Colab, I learned about the data science and the concepts of machine learning model. How to use the machine learning model in the data science field as well as types of the machine learning. I was introduced to the machine learning models and select the best model of machine learning for the data science problems. I solved the basic problems of data science using the machine learning models. I also completed the one major project, the project title is Women Cloth Reviews Prediction with Multi Nominal Navive Bayes

CHAPTER 02:

COMPANY INFORMATION

YBI Foundation is a Delhi-based not-for-profit edutech company that aims to enable the youth to grow in the world of emerging technologies. They offer a mix of online and offline approaches to bring new skills, education, technologies for students, academicians and practitioners. They believe in the learning anywhere and anytime approach to reach out to learners. The platform provides free online instructor-led classes for students to excel in data science, business analytics, machine learning, cloud computing and big data. They aim to focus on innovation, creativity, technology approach and keep themselves in sync with the present industry requirements. They endeavor to support learners to achieve the highest possible goals in their academics and professions.

Legal Name	: YBI Foundation	
Headquarters	: Delhi, Delhi, India	
Business Model	: B2C	
Founding Date	: Oct 2020	
No. of Employees	: <10	
Core Team	: 1. Alok Yadav	Co-Founder
	: 2. Dr. Arushi	Co-Founder

Students of Engineering, Management, Computer Application and one's interested to make career in emerging technologies like machine learning, AI, big data, cloud computing, data science etc.

User Age	: Less than 18, 18 to 25, 26 to 34
User Income	: Lower income, Lower-middle Income, Upper-middle Income, High Income
Location	:India, India Tier 1, India Tier 2, India Tier 3, Global, Asia Pacific, Europe, North America, South America, Africa
Contact	: support@ybifoundation.org WhatsApp (+91) 9667987711.

Read more at: <https://yourstory.com/companies/ybi-foundation>

CHAPTER 03:

INTERNSHIP DESCRIPTION

The data science and machine learning internship provided by Ybi Foundation. It's a free internship program at four weeks that means the internship program duration is one month. First of all, I was introduced the Ybi Foundation then the Google Colab. Chosen the Google Colab text editor. I was learned program execute using the google colab text editor as well the comments.

Objectives of Internship:

- Introduction to Python
- Introduction to Google Colab
- Import Dataset
- Data Wrangling
- Data Exploratory
- Python Libraries for Data Science and Machine Learning
- Read Data as Data Frame
- Explore Data Frame

Using the above following things, the dataset is prepared for the machine learning model.

- Select the feature and target
- Select the Best Machine Learning Model for Problem
- Model Predict
- Model Evaluation

CHALLENGES OF INTERNSHIP:

1. Understanding the Problems
2. Understanding the machine learning concepts
3. Model Selection
4. Non-Cooperative Seniors
5. Time Management

CHAPTER 04:

MAIN CONTENT / PROCESS IN INDUSTRY

The main content is machine learning concepts. In the sample machine learning model, there are 8 (eight) concepts following below:

Step 01:

- Import Python Library

Step 02:

- Import Dataset(data frame)
- Read Dataset

Step 03:

- Define target(y) and feature(x)

Step 04:

- Train-Test-Split

Step 05:

- Ordinary Least Square(OLS) also called as 'Select Model

Step 06:

- Train model(Fit model)

Step 07:

- Model Prediction

Step 08:

- Accuracy of the model -- Return the error values

CHAPTER 05:

DESCRIPTION OF INTERNSHIP EXPERIENCE:

My time at YBI Foundation was a four-week exploration of the exciting world of Data Science and Machine Learning. Starting with Python and Google Colab, I got the hang of things and set the stage for a fun learning journey. I got my hands busy importing datasets, tinkering with data, and diving deep into data analysis.

The internship highlighted the magic of Python libraries for Data Science and Machine Learning, helping me prepare data like a pro. I learned to pick out what's important in data (features and targets) and how to choose the coolest machine learning models. This coolness continued as I played with predictive modelling, wrapping it up with a smart evaluation using accuracy metrics.

Though I faced challenges, like understanding tricky problems and choosing the right model, the friendly atmosphere at YBI Foundation made it all part of the adventure. I gained heaps of know-how, both in theory and hands-on skills that make me ready to tackle the ever-changing field of Data Science and Machine Learning.

In a nutshell, my YBI Foundation internship painted a vibrant chapter of my journey, colouring me with skills in Data Science and Machine Learning. With a taste of real-world insights and support, I'm geared up to add some pizzazz to this exciting arena.

CHAPTER 06:**WEEKLY REPORT**

DATE	Week No.	NAME OF THE TOPIC/MODULE COMPLETED
<u>First Week</u> (From Date to To Date)	01	<ul style="list-style-type: none">- Introduction to Internship- Introduction to Python- Introduction to Google Colab- Introduction to Dataset- Introduction to Data Analyze
<u>Second Week</u> <u>(From Date to To Date)</u>	02	<ul style="list-style-type: none">- Introduction to Machine learning- Types of Machine Learning- Understanding to Problems- Apply the Machine Learning Steps- Select the Machine Learning Model
<u>Third Week</u> <u>(From Date to To Date)</u>	03	<ul style="list-style-type: none">- Introduction to Project- How to build the Project- Understanding to the Project Problem- Completed the Sample Project<ul style="list-style-type: none">✓ Diabetes prediction
<u>Third Week</u> <u>(From Date to To Date)</u>	04	<ul style="list-style-type: none">- Completed the Minor Projects<ul style="list-style-type: none">✓ Cancer Prediction✓ Chance admission prediction✓ Purchase Prediction✓ Credit Card Default Prediction- Explanation to major project- Select to the major Project for Internship- After that, Project Submission- Final Quiz Exam

CHAPTER 07:

CONCLUSION

The YBI Foundation internship has been an illuminating journey into the realm of Data Science and Machine Learning. Through the exploration of Python, Google Colab, and data manipulation, I've honed my analytical prowess. Understanding diverse machine learning categories and their real-world implications has broadened my skill set.

Engaging in practical projects, notably the Women Cloth Reviews Prediction utilizing Multi Nominal Naive Bayes, has fortified my practical aptitude. Navigating challenges, under the mentorship of industry experts, has cultivated both resilience and adept problem-solving capabilities.

In a nutshell, this internship has armed me with a robust toolkit for proficient data handling and the construction of effective machine learning models. The nurturing atmosphere at YBI Foundation has facilitated my growth, fostering both intellectual curiosity and practical finesse.

In summation, I've acquired invaluable competencies within Data Science and Machine Learning. This experiential fusion of theoretical knowledge and hands-on practice is bound to significantly impact my future undertakings within this dynamic and rapidly evolving domain.