Learning Roadmap







Auction Price Calculator



Read/Write Files





Chatbot



Fundamentals

of Al and ML



Medical Diagnosis



Decision Trees



Deep Learning



Neural Networks

Basic Syntax, Data Types, Variables, Loops, **Conditional Statements** - IF, ELIF and ELSE, Loops - For and While

Scope and Variables in Functions, Recursive Functions, Modules, Custom Modules, Reading and Writing Files in Python

Advanced Class Concepts, Subclasses, Inheritance in Classes, **Abstract Classes and** Methods, Chatbot Development

Working with NumPy Arrays, NumPy Functions, Pandas, Data Manipulation and Analysis using Pandas, Intro to AI and Machine Learning

Multi-class Logistic Regression, Decision Trees, K Nearest Neighbours, Support Vector Machines, **Building**, Visualisation and Tuning

Neural Networks. Preprocessing of Data, Training and Evaluation, Single and Multi-layer Neural Networks, Image Classification using MLNN

Month 1

Month 3

Month 5



Month 7

Month 9

Month 11

Month 2

Strings, Data Structures - Lists, Sets, Tuples, Dictionaries, Data Structure Operations -Creation, Indexing, Slicing, Introduction to **Functions**





Month 4

Error Handling, Debugging, Try-except blocks, Introduction to **Object Oriented** Programming -Abstraction, Inheritance and Polymorphism, Classes in Python



Error Handling



Month 6

Data Visualisation, Matplotlib, Customising plot elements, Creating complex plots, Introduction to NumPy, **Basic Array Operations**



Data Visualisation



NumPy Arrays

Month 8

Introduction to Regression, Simple Linear Regression, Multiple Linear Regression, Logistic Regression, Evaluation **Metrics for Logistic** Regression



Linear/Logistic Regression



Housing Price Prediction

Month 10

Non-Linearly Separable Data, Introduction, Preparation of Data and Implementation of Naive Bayes Algorithm, Introduction to Deep Learning



Breast Cancer Diagnosis



Email Spam Classification Month 12

INNOVATION PROJECT

Student will apply the concepts covered till now to make an **Innovation Project**

