Pre-requisites

Prior Knowledge

Team ID	PNT2022TMID54168
Project Name	University Admit Eligibility Predictor

Supervised Learning :

Supervised learning is an approach to creating artificial intelligence (AI), where a computer algorithm is trained on input data that has been labelled for a particular output. The model is trained until it can detect the underlying patterns and relationships between the input data and the output labels, enabling it to yield accurate labelling results when presented with never-before-seen data.

Supervised learning is good at classification and regression problems, such as determining what category a news article belong to or predicting the volume of sales for a given future date. In Supervised Learning, the aim is to make sense of data within the context of a specific question.

Unsupervised Learning :

Unsupervised learning is a machine learning technique in which models are not supervised using training dataset. Instead, models itself find the hidden patterns and insights from the given data. It can be compared to learning which takes place in the human brain while learning new things.

Unsupervised learning cannot be directly applied to a regression or classification problem because unlike supervised learning, we have the input data but no corresponding output data. The goal of unsupervised learning is to find the underlying structure of the dataset, group that data according to similarities and represent that dataset in a compressed format.

Regression :

Regression is a technique for investigating the relationship between independent variables or features and a dependent variable or outcome. It is used as a method for predictive modeling in machine learning, in which an algorithm is used to predict continuous outcomes.

Solving regression problems is one of the most common applications for machine learning models, especially in supervised machine learning. Algorithms are trained to understand the relationship between independent variables and outcome or dependent variables. The model can then be leveraged to predict the outcome of new and unseen input data or fill a gap in missing data.

Regression analysis is an integral part of any forecasting or predictive model, so is a common method found in machine learning powered predictive analytics. Alongside classification, regression is a common use for supervised machine learning models. This approach to training models required labelled input and output training data. Machine learning regression models need to understand the relationship between features and outcomes variables, so accurately labelled training data is vital.

Data Visualization :

Data Visualization is the graphical representation of information and data. By using visual elements like charts, graphs and maps, data visualization tools provide an accessible way to see and understand trends, outliers and patterns in data. Additionally, it provides an excellent way for employees or business owners to present data to non-technical audiences without confusion.

Flask :

Flask is a lightweight WSGI web application framework. It is designed to make getting started quick and easy with the ability to scale upto complex applications. It began as a simple wrapper around Werkzeug and Jinja and has become one of the most popular Python web application frameworks.

Flask offers suggestions but doesn't enforce any dependencies or project layout. It is up to the developer to choose the tools and libraries they want to use. There are many extensions provided by the community that make adding new functionality easy.