AI-POWERED NUTRITION ANALYZER FOR NUTRIONISTS ENTHUSIASTS

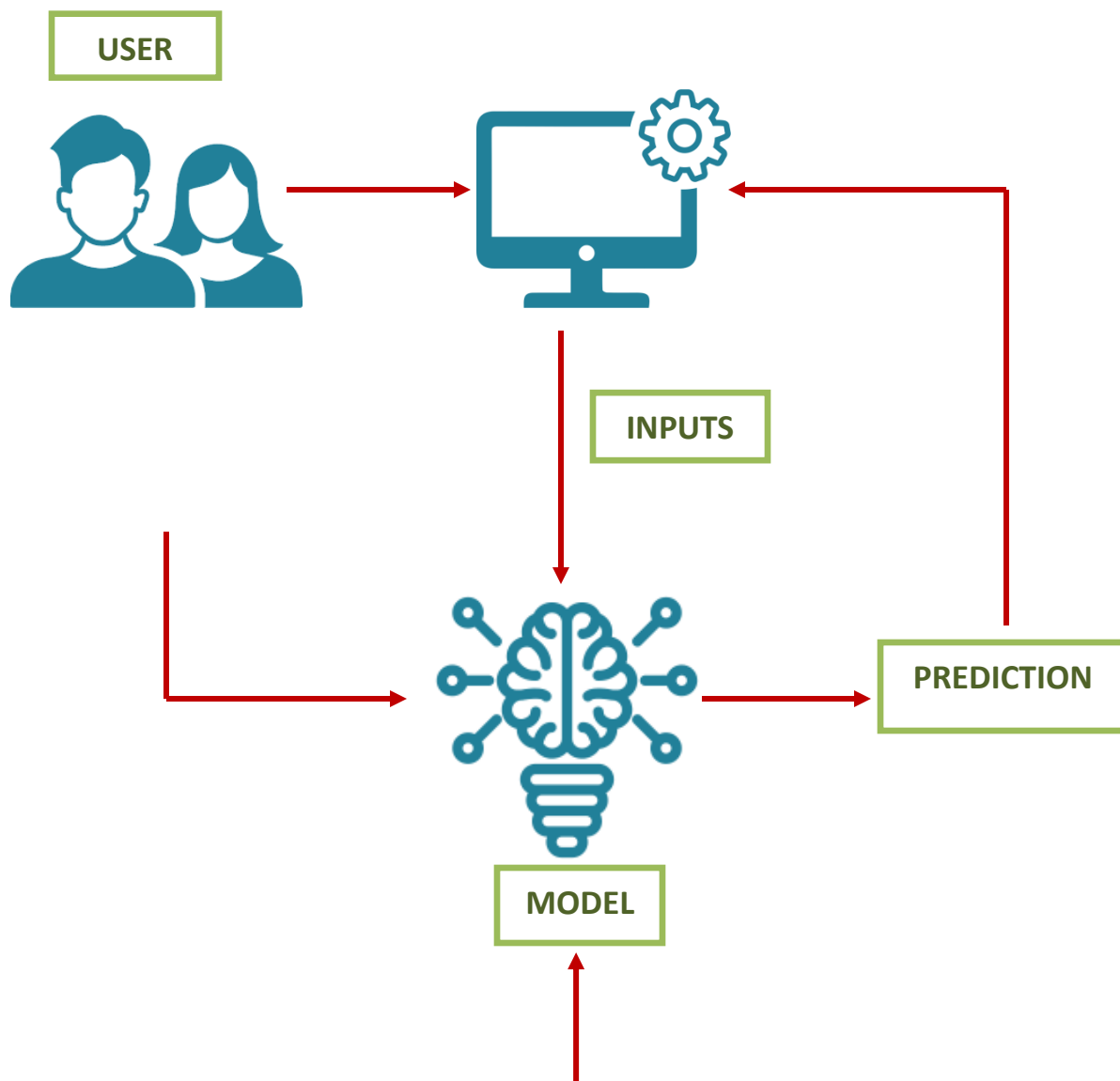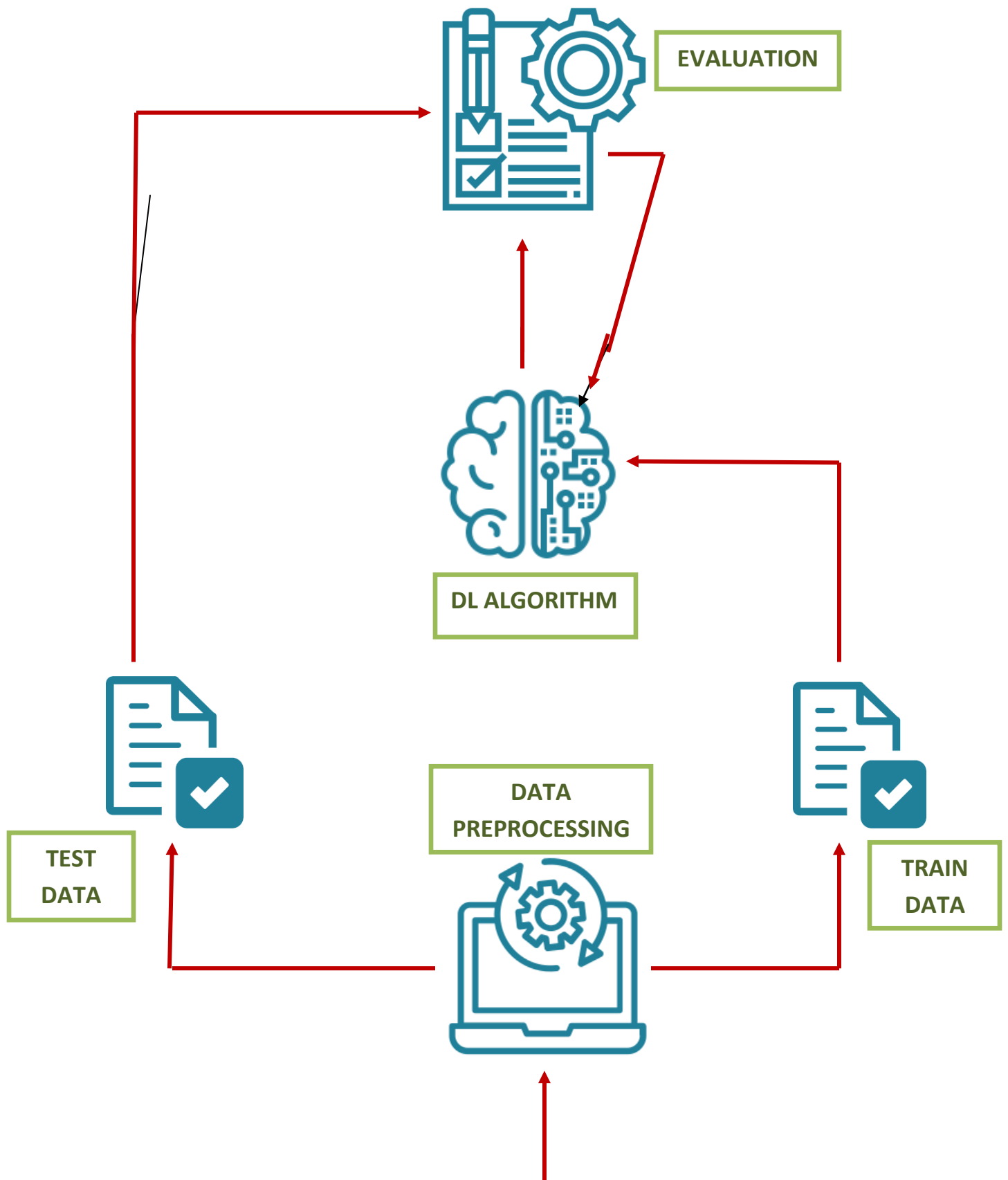| TEAM ID	**PNT2022TMID13326**
PROJECT NAME	AI-POWERED NUTRITION ANALYZER FOR FITNESS ENTHUSIASTS

OBJECTIVES:

Being healthy should be an integral component of your life. A Healthy intake of food can assist in the prevention of chronic diseases and long-term ailments. What you eat is closely related to your health. Eating a healthy diet can help boost your immune systems, help you maintain a healthy weight and can improve your overall health. The importance of diet can't be overstated for a healthy lifestyle. People get the vitamins, minerals and nutrients they need to function and thrive from the foods they eat, so choosing foods that offer the most of those components helps improve quality of life. It's just as important to limit foods that are high in fat, sugar, sodium and cholesterol as it is to choose healthy foods.Nutrition helps in functioning, maintaining, or improving important bio metabolisms like building muscles, producing energy, thriving body cells, improving body health, replenish malnourishment, and strengthening immunity. If food is the reason, Nutrition is the result. Consumers have become more concerned over the quality and compositions of their food purchases, the contained ingredients, and the presence of additives and contaminants. Therefore, knowledge of the chemical and Biochemical composition of foods is important to the health, well-being, and safety of the consumers. We consume food so that we can obtain proper nutrition. Hence it is very important for us to know the composition of nutrients in our food. Through a nutrition analyzer we can measure the nutrients and with that information we can make a healthy diet by adding nutrients required for our body and excluding which is not good for health.

SOLUTION ARCHTECTURE:

- This solution helps fitness enthusiasts to do Nutritional analysis of food which provides information about the chemical composition, processing, and quality control of food.
- The chance of occurrence of error is minimal since the model provides more precise reports of the analysis.
- First, the user captures the images of the food and uploads it.

- Next, the image will be sent to the trained model.
- The model will classify the food based on the different characteristics like colour, shape, texture etc.,
- The model analyses the image and detects the nutrition like (Sugar, Fibre, Protein, Calories, etc.).

USER

INPUTS

PREDICTION

MODEL

EVALUATION

DL ALGORITHM

TEST
DATA

DATA
PREPROCESSING

TRAIN
DATA

IMAGE DATA

RELIABILITY:

It is Important that the AI powered nutrition analyzer for fitness provides should Must reliable.

How a person can find it is reliable? It is easy to find that is he/she can compare the nutrition based food with other nutrition related application so, it can easily rectify whether it is reliable or not.

But it take too much time, to avoid this a reliable application should made in which it itself produces whether we can get correct solution or not. So, it is necessary that the AI powered nutrition analyzer for fitness should have proper data and information in which we can get a correct information about it and also get a proper guidance about it.

With the proper guidness and proper information in which we can get a nutrition properly and we can have get a proper fitness plan.

It should also provides the information on nutrition and health which it should prevents from health information on diseases, health risks and prevention guidelines. It should also provides an extension a research based online learning network with several resource areas, so it provides more reliability in that area. For more reliable it can also contains the calorie information, balanced diet plans, what type food can consumed at what time etc..... So, by this way it can reliable.

SCALABILITY:

- The architecture for AI powered Nutrition Analyzer for fitness provides the clear procedure daily consumption of food and helps the user to maintain a healthy diet.

- According to their tracking system implemented in architecture provide the proper mechanism to the every individual of their nutrients intake which can be increased or decreased.
- The premium amount for analyzer is very much optimum.

PERFORMANCE:

- It should provide more number of users to consume at any time and at any place.
- It should provide Reliability, Scalability, Security and Usability.
- It should contain minimum data while over-paging the websites or application and it is necessary that it should not exceed more than 20mb.
- While consuming the page it should provide the response as much as possible without any delay or time traffic.

- The connection should e properly maintained so that it can use while travelling or in remote places.
- The nutritious food to meet their dietary needs and the food preferences for an active and healthy life.
- It should be consistently access, availability and affordability of foods and beverages that promote well-being and prevent from diseases.
- It should suitable in all situations that exists to all people, at all times.

SECURITY:

- AI powered nutrition analyzer for fitness should contain more security in which our data which entered or maintained should be more security.
- With the help of the username and password it provides more security in which it can access more securable and the data are private.
- It should be social-economic which should access to sufficient and safe to use.

USABILITY:

- No training is required to access the Nutrition Analyzer.
- The results should be loaded within 30 seconds.
- It should be user friendly and comfortable.
- It should be simple and easy to use.

- The results should be self explanatory so that it can be understood by common people.