PC Components Classification

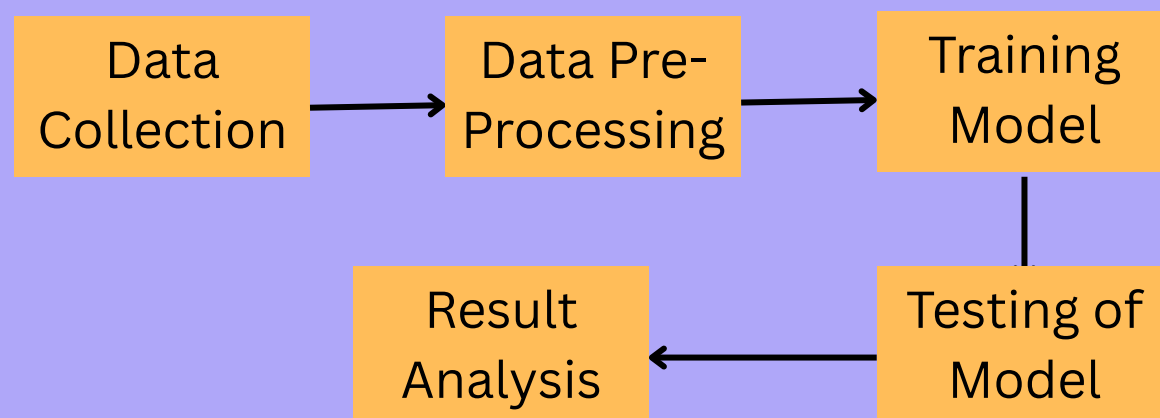**Name**:- Honey Mehta **Branch:-** M.Tech (AI)   **Roll No**:- 8025340018

1. Abstract

This project focuses on teaching a computer to recognize different PC components like CPUs, GPUs, RAM, and storage devices from images. By analyzing their shapes, labels, and designs, the system can quickly identify each part. Such a model can help beginners, technicians, and sellers save time, reduce mistakes, and make assembling or repairing computers easier.

2. Introduction:

PC components like processors, graphics cards, and memory modules can look confusing, especially for beginners. This project uses image recognition to help identify each part quickly and accurately. By teaching the system to spot their unique shapes, labels, and designs, we make it easier for people to understand, sort, and work with computer hardware.

3. Methodology

Data Collection → Data Pre-Processing → Training Model → Testing of Model → Result Analysis

4. Input/Output

Test	Actual	Perdicted	Result
	Ram	Ram	✅
	Mother board	Mother board	✅
	Hdd	Hdd	✅
	GPu	Gpu	✅

Accuracy of Model = 90.5%

5. Steps To use Model

1. Scan the QR Code
2. Upload sample Photos
3. Select Uploaded Photo
4. Get the model Prediction

6. Conclusion

This model makes it easier to tell PC parts apart, even for those who aren't tech experts. By recognizing each component from its look, it can speed up repairs, assembly, and learning. It's a step toward making computer hardware more approachable for everyone. Accuracy can be improve by fine-tuning on larger or more diverse database.

7. Refrences

1. https://landing.ai/
2. https://www.kaggle.com/datasets/samithsachidanandan/image-classification-cnn-fruits-dataset