PARALLEL COMPUTING BIG ASSIGNMENT PROPOSAL

CUDA Implementation Integrated Machine Learning Algorithms of **KNN**, **K-Means** and **PCA** Algorithms

Team members & Workload:

Name	Section	BN	Workload
Donia Gameel	1	24	KNN
Shaza Mohammed	1	32	K-means
Heba Ashraf Raslan	2	32	PCA

Project Description:

Our project aims to implement an integrated solution using CUDA for parallel computation of three fundamental machine learning algorithms: K-Nearest Neighbors (KNN), K-Means clustering, and Principal Component Analysis (PCA). These algorithms are interrelated in their applications and can benefit from parallelization using CUDA, allowing for efficient processing of large datasets.

Block Diagram:

Module	Block Diagram
KNN	
K-Means	
PCA	