CSE 572
Assignment #1: Activity Recognition

PHASE 1:

	Unsatisfactory 5	Average 10	Above Average 15	Mastery 20	Score
Phase 1: Data cleaning	<A array of raw data for all user with no labels>	<One array per user with no labels>	<One array for all users with rows labeled eating, and one array for all users with rows labeled non-eating>	<Two arrays per person. The first array have rows each labeled eating. The second array will have rows each labeled non-eating. All the rows will have the same number of columns.>	

PHASE 2:

	Unsatisfactory 2.5	Average 5	Above Average 7.5	Mastery 10	Score
Phase 2: Part a	Explanation of two feature extraction algorithm	Explanation of three feature extraction algorithm	<Explanation of four feature extraction algorithm>	<Explanation of five feature extraction algorithm>	
Phase 2: Part b	Logical Intuition behind all two feature extraction algorithm	Logical Intuition behind all three feature extraction algorithm	Logical Intuition behind four feature extraction algorithm	Logical Intuition behind all five feature extraction algorithm	
Phase 2: Part c	Correct code for extracting two features	Correct code for extracting three features	Correct code for extracting four features	Correct code for extracting five features	

Phase 2: Part d	Graphs with X and Y labels showing features for both eating and non eating class for two features	Graphs with X and Y labels showing features for both eating and non eating class for three features	Graphs with X and Y labels showing features for both eating and non eating class for four features	Graphs with X and Y labels showing features for both eating and non eating class for all five features	
Phase 2: Part e	Compare intuition and graphs for two features	Compare intuition and graphs for three features	Compare intuition and graphs for four features	Compare intuition and graphs for all five features	

PHASE 3:

	Unsatisfactory **2.5**	**Average** **5**	**Above Average** **7.5**	**Mastery** **10**	**Score**
Phase 3: Subtask 1	<A array of features for all user with no labels>	<One array per user with no labels>	<One array for all users with rows labeled eating, and one array for all users with rows labeled non-eating>	Each person has two arrays. One array with rows each having features from a single eating action. One array with rows each having features from a single non eating action.	
Phase 3: Subtask 2	Wrong code	Wrong input to PCA. Providing raw data as input instead of features	Only obtain Eigen vectors	Write correct code for performing PCA. Obtain eigen vectors. Use spider plot to show the eigen vectors.	
Phase 3: Subtask 3	Consider the eigen vectors with top two eigen values. Generate the top two modified features.	Consider the eigen vectors with top three eigen values. Generate the top three modified features.	Consider the eigen vectors with top four eigen values. Generate the top four modified features.	Consider the eigen vectors with top five eigen values. Generate the top five modified features.	
Phase 3: Subtask 4	Wrong code	Not applicable	Not applicable	Multiply the PCA matrix with the feature matrix	

Phase 3: Subtask 5	Compare the top two PCA modified feature with unmodified features from Phase 2 and if they do not match argue why they do not match.	Compare the top three PCA modified feature with unmodified features from Phase 2 and if they do not match argue why they do not match.	Compare the top four PCA modified feature with unmodified features from Phase 2 and if they do not match argue why they do not match.	Compare the top five PCA modified feature with unmodified features from Phase 2 and if they do not match argue why they do not match.	<Scale to 10>