

# Framework

## **Introduction**

Our team use the share personal framework on our project. We have 6 dimensions on it: Data Domain, Preprocessing, sharing Trigger, Persistence, Post content and Audience.

## **Data domain**

For our data domain, the type of data collected and shared are pictures and videos. Most of the data are the notebook created by student or the video uploaded by tutors.

## **Preprocessing**

In order to ensure the privacy of user information in the transmission process, raw data needs to be processed in advance, and users can delete it at any time.

## **Sharing trigger**

As a student to record their learning platform, user behavior of the first movement is reviewing their learned knowledge and make record, at the same time considering the user needs to continue to review the content of the learned, or discuss some learning difficulties with others, they need to open the platform to check once record. In addition, if students find some interesting or important knowledge, they will add it their records and share it with others. So these are the sharing trigger of our system.

## **Persistence**

The persistence in our system is the lifetime of the system which is at least 6 months since we have to make sure the user can use the system and the data are safe in the whole semester.

## **Post Content**

The students can write and upload their study notes and the other students can read

these study notes. It can be complex graphs or some user-generated text. These made up our post content system.

## Audience

In our audience system, Friends involved in a study and the students involved in a class in personal study record(wiki).

Dimension	Definition	Points Within Dimensions	Prior Work
Data Domain	Type of data collected and shared	Physical activity	[2,10,11,18,19,21,35,38,40,42,48,55,56]
		Biometrics	[10,15,16,40,49]
		Location	[3,5,6,9,12,14,17,19,23,24,27,28,29,30,34,36,45,46,54]
		Pictures	[7,13,23,25]
		Other, including environment, food, and music	[7,10,20,22,37,50,51]
Preprocessing	Transformations applied prior to sharing	Raw data	[7,10,12,15,18,19,20,23,24,25,36,46,49,50]
		Aggregate daily totals	[2,10,11,18,35,56]
		Goal achievement	[2,11,21,35,42,56]
		Summarization into trends	[10,19]
		Automatic or manual naming of data	[3,5,9,12,27,54]
Sharing Trigger	What causes the data to be shared	Always-on passively streaming	[5,9,18,20,28,46,50]
		Streaming during a special activity or event	[15,16,40,49]
		Arrival at or departure from a location	[3,6,34]
		Once per day	[18,21,56]
		Determined by the self-tracker	[2,7,11,13,14,17,21,23,24,25,27,36,37,42,54,55,56]
Persistence	How long the share is visible	Request by the sharing audience	[12,27]
		Transient	[3,5,11,12,13,27,40,49]
		For the lifetime of the system	[7,9,35,56]
		For the lifetime of the social network	[14,15,16,18,20,42,46,50,55]
		Self-tracker can delete content	[18,20,25,50,55]
Post Content	What information is shared	System-generated text	[2,5,11,12,19,42]
		Numerical summaries	[2,11,15,16,35,37,42,56]
		User-generated text	[2,9,11,38,54,55,56]
		Graphs or other visualizations	[2,10,15,16,19,23,37,42,49]
		Passive notification (noise, vibration)	[3,34]
Audience	Who is receiving the post	Broader social network	[15,16,18,19,21,28,37,42,55]
		Dedicated social network	[14,20,21,24,36,46,50]
		Strangers involved in a study	[7,35]
		Friends involved in a study	[2,5,6,11,12,13,27,34,38,40,56]
		Family or significant others involved in a study	[3,9,38]

**Table 1.** We develop a design dimension framework for sharing personal informatics data by extensively considering prior work and the points explored within the space.

