Algorithms

Preprocessing

Intelligent Buddy Matching

Forming a study group

Preprocessing

User enters class/subject/topic

Create the list of people looking for buddies in the same class/subject/topic

Filter out buddies with different availability

Remark buddies who are on the blocked list

Possible match list is created

Intelligent Buddy Matching

Preprocessing is done

Access the possible matched list

Access each possible matched buddies’ study preferences vectors

Compute similarity of two vectors

Add the result to similarity score

Sort possible matched list by similarity scores

A sorted matched buddies list is created
**Similarity Score**

Learning Style | User: Jamal Williams | User: John Crotzer
---|---|---
Visual | 1 | 1
Auditory | 1 | 0
Kinesthetic | 1 | 1
Reading/Writing | 0 | 0

$\cos \theta = \frac{JW \cdot JC}{\|JW\| \|JC\|}$

$= \frac{2}{\sqrt{2} \times \sqrt{3}}$

$= \frac{2}{\sqrt{6}}$

$\approx 0.8165$

**Forming A Study Group**

Case 1: No matches found
Case 2: Match found

2.1 Existing groups
2.2 No existing group

2.2.1 Only matched with blocked buddies
2.2.2 Not only matched with blocked buddies