

ReadME:

1. Install several required modules by inputing the following commands under project directory.
"npm install express;"
"npm install sqlite3;"
"npm install body-parser;"
"npm install express-session;"
"npm install handlebars;"
...
2. Input "node sever.js" to run server.
3. Type "localhost:3000" in URL and the user login page will show up.
4. **Initial user information and collect courses:** If you are an old user that was already existed in the database, then you only need to "login" using your name and check the courses you've taken; Otherwise, if you are a new user, click "New User" and input your information(which will be added to database) and then collect the courses you've taken.
5. **Collecting user topics and skills:** Select topics and skills that you are interested in and rank them. Note that to make later course recommendation more reasonable, you are forced to rank more than 5 for both topics and skills, though you don't need to rank all of them.
6. **Computing potential recommendations:** Now you could get course recommendation based on options "Best predicted grade", "promoting my interests", "improving my skills", "Best predicted evaluation".
7. **Data collection:** Here you can choose to add your data to CEA database. For example, grade, general course & instructor rank; you are also allowed to add new interesting topics and skills. Note that this step is optional, you can exit beforehand.

Features:

1. We implemented a web application using nodejs where we can collect and analyze data from the large amount of users.
2. If the active user is an old user then the course recommendation considers both old skill & topic data stored in CEA database and the new skill & topic data he/she just selected, which makes the recommendation more accurate.
3. We used several views to store temporary data so that the whole application runs more efficiently.
4. We took missing values for both age and gender into consideration when computing neighbour distance.