

Topic: Recommender System for Extracurricular Activities at UPRM (RCEA@UPRM)

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Problem statement:

Extracurricular activities can be means to hone a students talents and interests outside of the classroom.

Therefore, students need to be able to identify the appropriate talents and interests from an early age so that the talents possessed by students can develop properly.

Target:

By Friday, October 7, we anticipate to evaluate a recommender system that considers a users preferences and needs to suggest extracurricular activities at UPRM. Additionally, a web-based platform would contain a library of extracurriculars at UPRM.

Causes:

Problem: UPRM student don't diversify their college experience

Why? Students aren't informed of ways to expand their academic or professional career beyond the classroom

Why? Students aren't informed of extracurriculars or projects to get involved at UPRM

Why? Information about UPRM extracurricular activities or student led projects aren't accesible to the user searching for them

Why? Forums with extracurriculars or projects are dispersed thorough multiple platforms and/or aren't updated

Why? Means to gather information about extracurriculars are not unified (Department websites), obsolete (Google forms), and are provided to the public poorly (Excel sheets)

Countermeasures:

1) Provide users a central web-based platform with mobile browsing support for accesibility that provides a library of student clubs, organizations, and projects contact information and summary of their initiatives at every faculty of UPRM

2) Develop and implement a multi-criteria recommender system that user academics and career interests are paired to extracurriculars that best suit their preferences

Check/Evaluate:

A content-based recommender system using a Tag and Rating-based to create Extracurricular Embedding would pair students major with an extracurricular activity and sort the list by how the activity relates to their interest. We would evaluate accuracy, diversity, and satisfaction

1) Model accuracy may indicate that users academics are within the predicted field that a users major would be highly sought out

2) Diversity would be denoted as the various clusters made by the K-Nearest Neighobr algorithm, grouping by a rating-based identifier.

3) A low-turnout of suggestion satisfaction would indicate failure to pair user interest with expected activities.

Project success would be determined by providing accurate suggesions to users based on the areas of interests with the addition of multiple pathways to diversify their talents. Additionally, medium search and browsing engagement would indicate unified platform usefulness.

Standarize:

The design of RCEA@UPRM is scalable and it can be expanded in the future to consider the suggestion of companies and institutions that align with a students career interest, fostering recruitment of UPRM students with a desire in that field.

Moreover, courses that align with a students professional interests would be implemented as a means to diversify the academic coursework of a user.