

INFO 634 Project Abstract

Please think about tentative ideas for your final project, which will account for 24%24% of your final grade.

This is a group project so please find other students to work together (**up to four** students).

Please **choose one** of the following project types:

I. Data Mining and Report

Find an **application domain** where you can use apply the methods of data mining for knowledge discovery (see topics above). Use real (not hypothetical) **data** and problems related to your interests. While there are various types of data you can use, make sure there are sufficient data for your problems.

General **topics of data mining** you can think about:

- Generalization: integration, aggregation, summarization, etc.
- Association and correlation analysis: frequent patterns, rules
- Classification: training and testing (predictions)
- Cluster analysis: major patterns, themes, discovery of new categories
- Outlier analysis: outliers, noise or exception
- Sequence, trend and evolution analysis
- Graph mining, network analysis, web mining, etc.

The focus is on your mining *processes, analysis, and report*.

II. Algorithm Implementation

Pick a specific **data mining method** and implement it as a piece of software that can be tested with data. You can develop the method in Python or any other languages. The method (algorithm) can be any process in:

1. Data cleaning
2. Data integration

3. Data selection
4. Data transformation
5. Data mining
6. Pattern evaluation
7. Knowledge representation

The focus is your *design, code, test, and brief documentation*.

III. Literature Review

If you are interested in a specific **research** area in data mining, you may choose to do a literature review about it. For this type of project, your survey of the area, critical review, and writing will be the focus of your work. There are a wide range of topics that you can review (see above). You can consult the textbook and related revenues such as KDD, CIKM, etc for additional references.

We do not cover everything in this class so feel free to explore.

Group Submission

To submit the project abstract, you need to:

1. Form a group of up to 4 students.
2. Pick a category and identify your topic/problem.
3. Write and submit an abstract about your project (about **150 words**).