

The University of Texas at Austin
CE 395 R 5-Data Mining – Spring 2018

Semester Project

GUIDELINES:

- Students should inform their group preferences (two students per group) to the instructor by 02/02/18.
- The presentation schedule will be announced by 02/09/18.
- Please submit each deliverable (one per group) at the beginning of the lecture on their respective due dates.
- For this project, each group will mine a database to analyze and/or solve an engineering problem. Each group must identify a data set for this project. Examples include: productivity, safety performance, pavement management, environmental remediation, project disputes, soil characterization, structural monitoring, schedule control, property appraisals, and quality control, among others.
- On Phase I of the project each team must submit a project proposal. The proposal must describe the problem that will be investigated, justify the need to conduct a data mining study to analyze/solve this problem, provide a short background review on related topics, specify the specific project objectives and scope, identify the target data set, and describe the proposed data mining approaches. Each team should perform at least two data mining tasks (e.g.: classification and clustering) and use at least three different algorithms/methods (e.g.: decision tree, neural network, and naïve bayes).
- On the Final Phase of the project each team must submit a project report, including the results, recommendations, and conclusions.
- Each group must meet at least twice with the instructor until the end of the course to discuss the project proposal, progress, and results. Groups should contact the instructor to schedule these meetings.
- The data mining should be conducted using WEKA, SPSS, or other software.

DELIVERABLES:

- Deliverable 1 (03/23/18) – Project Proposal: problem definition, background, need, objectives, scope, target data set, and proposed data mining approaches.
- Deliverable 2 (05/04/18) – Project Report: summary of the items included on deliverable 1, final results, conclusions and recommendations.

PRESENTATIONS:

- Project Report Presentations: 04/27/18 and 05/04/18