

# **EIN 6905 Data Analytics for System Monitoring**

## **Project Description**

### **Objectives**

To give students an opportunity to further study and investigate topics discussed in the lecture and also their applications. In doing this you should gain better insight into the capabilities and limitations of various methodologies and techniques. You will also be required to give a clear and concise presentation of the material at the end of the term. For the project, you are strongly encouraged to work in a group of two, but individual project is also allowed upon the instructor's approval.

### **Project Description**

In general, a project should follow any one of the following three formats:

1. Focused study on concept/technique from the course pack or lecture material, and deliver a presentation. Special requirements:
  - a. Select a topic that is related to the general theme of the course contents (not necessarily discussed in the lectures);
  - b. Search and study related papers or references on the topic;
  - c. Provide validation, additional examples, questions or problems related to the chapter to better illustrate the concepts/techniques.
2. Focused study on an application or a dataset related to a specific topic or domain of problems.
  - a. Related papers/references on the same topics should be identified and reviewed.
  - b. Provide additional examples, questions, or problems related to the application or data for better illustration of the results or findings.
  - c. A comprehensive summary of findings on the topic should be presented to the class.
- 3 The more advanced student may wish to pursue a more theoretical topic and develop a new technique or a new interpretation of an existing technique.

### **Presentation Requirements**

The contents of the presentation must include:

- introduction (i.e., background, motivation, objectives, and a brief summary of the results)
- proposed/reviewed concepts/techniques
- additional examples, problems/solutions, and interpretations
- critical comments on the topic and summary

Also, a reference list of the book chapters or the related papers should be attached to the end of the presentation.

## **Presentation Requirements**

Each group will give about 25-minute presentations, and 5 minutes of which will be devoted to discussion and questions. All group members need to present at least one content part during presentation. Tentatively dates for presentations will be on December 2<sup>nd</sup> and December 7<sup>th</sup>. All students are required to watch the presentations and give peer evaluation comments.

## **Important Dates**

- **Tuesday, October 26<sup>th</sup>**: The project title, ONE paragraph abstract, and team member information should be submitted on Canvas.
- **Friday, December 10<sup>th</sup>**: Submit presentation/report (with datasets, codes, and supplemental materials if available) via Canvas.

## Term Project Evaluation

Student(s) \_\_\_\_\_ Date \_\_\_\_\_

Problem statement (15) \_\_\_\_\_

Correctness of the approach (20) \_\_\_\_\_

Creativity and significance of the result (20) \_\_\_\_\_

Logic and organization of the presentation (15) \_\_\_\_\_

Quantity of the work (15) \_\_\_\_\_

Visualization and clarity (15) \_\_\_\_\_

**Overall (100)** \_\_\_\_\_