



## DTI5126 – Fundamentals of Applied Data Science

Summer 2022

### Project Guidelines

#### Team Building:

This project should be completed by a team of **5 students**. As a first step, group members should register in one of the available groups on Brightspace. Please note that all team members are equally responsible for the deliverables, and will all receive the same points for the project report and presentation.

Suggested topic should focus on one of the following or you can propose your area of interest:

- Customer Relationship Management
- Insurance
- Real Estate Property Management
- Banking
- Retail
- Transportation
- Healthcare
- Supply Chain Management
- Product Management
- Etc.

#### Project Resources:

1. Use publicly available references, academic journals, conference proceedings. All references must be published in or after 2017.
2. Your own contribution: critique what you have read, give your point of view of how work in this area is moving, what is missing, or needs to be improved, propose approaches/framework or implementation of a ML to solve the problem, etc.

#### Project Deliverables:

**1. A two-page project proposal uploaded to Brightspace (12pt font):**

Each group is required to submit a 1-2 page proposal. This proposal should outline the suggested topic, and list (at least a subset of) references to be used for the project. Please note that the references can be updated for the presentation.

##### **Project Proposal Guidelines**

- **Introduction:** Provide a description of the basic facts and importance of the project topic - What is the motivation for the project, and how important is it for the industry practice/knowledge advancement?
- **Problem Statement:** Identify the issues; What is the specific problem that needs to be addressed (e.g. suboptimal solution, low performance, newer approach required...)?
- **Objectives:** What are the benefits/impact (e.g. better understanding, improved productivity ...) that will be generated if the problem is solved?
- **Background & Literature Review:** What is known/what has been proposed in the past? And, why is your project topic still necessary? Review published work to extract some background information necessary for the proposed project and its significance. Also, include critical evaluation of existing knowledge and identify the progress this project intends to provide.

- **Methodology:** Describe what you need to do and how you will solve the problem to achieve proposed objectives? Which systematic approach will be used?
- **References:** List all references cited in the text, including all authors and the full title of the publication. Please follow the uOttawa guideline on academic reference and citation style.

## 2. Presentation:

PowerPoint presentation to be presented in class. You will have about 10 minutes to present your work.

Your presentation slide set should include at least the following items:

1. **Problem formulation** (describe the main topic of the presentation).
2. **Introduction** (lay out the background for your work)
3. **Details** (e.g. details of your work, study or project)
4. **Summary & concluding remarks** (mention the summary of your project; express your own opinions regarding the future trend, your observations and recommendations, etc.)
5. **References** (list all references you consulted for your case study including web links, articles, books, interviews, etc.)
6. **Make sure that you do not copy and paste from any sources. Any used figures must be appropriately referenced on the same slide.**
7. The last pages of your slide set must include all references you consulted. Also, mention the references on each pages/image/figure of your presentation if the materials of that page are not yours (i.e. company web site, article citation, etc.). You can write the ref number, and list the reference on the last page of the slide.

## 3. Final Project Report (uploaded to Brightspace):

The final paper should at least include:

- i. Abstract
- ii. Introduction
- iii. System Architecture
- iv. Model
- v. Performance Evaluation
- vi. Summary and conclusion
- vii. Bibliography (sound references & properly cited)

Overall, the report should be 5 pages long (including graphs, appendices). Use the IEEE conference latex format (can be downloaded online) to complete the report. **A direct copy and paste of the referenced material or from reports used in any other courses, into your report is not allowed. The soft copy of your report may be applied to a search engine to detect possible violation of this rule.**