Northeastern University

ALY6080: Signature Assignment Individual Project Proposal

Purpose

The purpose of this assignment is to help students practice the analytical skills learned so far to propose a real problem and a real solution on a given domain area. The students will gather requirements, research and propose an analytical tool, communicating their solution to managers on a real company, therefore preparing them to deal with their new professional field. **This assignment does not involve doing any analysis, but proposing an analysis**. It should show case your abilities to deal with a real world analytical project, therefore demonstrate your key analytical thinking and demonstrate that you are getting acquainted with the tools of the trade.

Connections to Program Learning Outcomes

PLO6: Integrate the major theories, tools, and approaches in data analytics to identify data-driven insights for informed business process management.

Connections to Capstone Course Learning Outcomes

Upon the successful completion of this course, students will be able to apply the following concepts on real-world business data and organizational strategic goals regarding data use:

1. **Practical Applications:** Analytical strategies based on organizational needs
2. **Process Planning/Mapping:** Implementing strategic initiatives to prepare for project development
3. **Project Scoping:** Resources, activities, scheduling, and other needs
4. **Big Data Analytics:** Analyzing and identifying patterns in data using applied analytics to answer the organizational needs (tools, theories, hands-on applications, etc.)
    Business-Case Presentations: Proof of Concepts - The summary and delivery of final strategies based on organizational needs

Assignment Description: Business Proposal

Create a business proposal for the sponsor; the idea is that you present a business question to be solved **through an analytical tool**. You must include the literature review on the selected topic or issue to back-up your solutions/ideas (at least 2 peer-review articles).
In order to have a convincing proposal, you need to present good visuals and a mock-up of the analytical tool you are proposing to be developed.

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The project proposal should be described in a Word document (a minimum of 1200 words). The Word document should include a title page (containing student's name, assignment title, course number and title, the current academic term, instructor's name, and the assignment completion date), as well as a reference page. The Word submission of each project will consist of the following sections:

A. Statement of purpose
Provide a background of the project. Where did it come from? Clarify the business question to be addressed. What is the opportunity/ problem to be solved? What are your goals by proposing this project? How does the organization benefit from this work?

B. Scope of the project
What is the scope of work to be completed in order to accomplish the goal(s) of this project? Identifiy the key deliverables that will be created through this project. This should include deliverables to support your proposal and may include deliverables created to support the final sponsor deliverable.

C. Background research and literature
Why is it a good idea to implement this project (rationale)? What is the literature that back-up your idea? Are there any similar successful projects that can corroborate to the success of the one you are proposing? Describe the research you did to prove the viability of your project proposal. You need to have a subsection called literature where you summarize **two peer-reviewed articles.**

C. Design and data collection methods
What is the data that can be used to accomplish the goal? What is the source of the data? What kind of tests do you propose to be used for data exploration and analysis?

D. Implementation methodology and strategies
How will you go about to implement your proposal? Is it an interactive dashboard, a predictive model or both? Describe the methods and strategies that should be used in order to create and implement the interactive dashboard and/or predictive model. Be detailed about statistical tests, graphs, and/or model packages that can be used and how. Create mock-ups of screen shots or use some similar ones you found on your literature review (enough for the reader to understand how it can be created and implemented)

E. Conclusion
Tie it all together with the goal of your proposal.

The project proposal will be submitted on TurnItIn and should not have more than 25% of similarity. Note that this similarity threshold applies to similarity with your classmates work and similarities with other sources. Your grade will suffer if you have not used in line citations appropriately and/or have not rephrased material in your own words (quoting references is allowed, but following guidelines established on APA notation)

Criteria of Success: Project Proposal Rubric

Category	Above Standards	Meets Standards	Approaching Standards	Below Standards	Pts or %

Statement of Purpose	The proposal has a clearly stated and professionally relevant purpose. The overview is well organized with a cohesive focus that is integrated throughout the document. The questions and hypothesis state the research problem clearly, including the motivation for undertaking the research and the potential impact of the proposed project goal.	The proposal has a clearly stated and professionally relevant purpose. The overview is organized with a focus. The questions and hypothesis state the research problem clearly and present the potential impact of the proposed project goal.	The proposal has a stated purpose that lacks clarity. The overview is organized but lacks focus. The questions and hypothesis state the research problem but lack clarity. The potential impact of the proposed project goal is implied.	The purpose is unclear; organization is poor and lacks focus. The questions and hypothesis do not state the research problem clearly and fail to state or imply the potential impact of the proposed project goal.	
Scope of Project	The scope is feasible; project could be completed within the available timeframe including data collection, interpretation, and production. Provides succinct, clear, logical description of the objectives and plan of action.	The scope is feasible; project could be completed within the available timeframe including data collection, interpretation, and production. Provides description of the objectives and plan of action.	The scope could be possible; project may be completed within the available timeframe including data collection, interpretation, and production. Provides imprecise or unclear objectives and plan of action.	The scope does not seem manageable; project could not be completed within the available timeframe including data collection, interpretation, and production. Assumptions for plan of action are faulty or unclear.	
Background Research & Literature	Presents an in-depth and coherent theme via relevant resources and a variety of	Presents an in-depth and logical theme via relevant resources. Evaluates and synthesizes all of the key	Attempts to present a logical theme via relevant resources. Evaluates and synthesizes some of the	Fails to present a logical theme or make use of relevant resources. Fails to	

	studies. Evaluates and synthesizes all of the key concepts and includes succinct and precise conclusions based on supporting facts and offers insights into the main problem or topic.	concepts and includes succinct and precise conclusions based on supporting facts.	key concepts and includes conclusions.	evaluate and synthesize he key concepts and does not include clear conclusions.	
Design and Data Collection Methods	The proposed design is appropriate for testing the proposed questions or investigating the research problem, and identifies probable sources of quality data.	The proposed design is appropriate for testing the proposed questions or investigating the research problem, and identifies some probable sources of quality data.	The proposed design is generally appropriate for testing the proposed questions or investigating the research problem, but does not clearly identify probable sources of data.	The proposed design is not appropriate for testing the proposed questions or investigating the research problem; does not identify probable sources of data.	
Implementation Methodology and Strategies	Proposes state-of-the-field design and development methods consistent with established practice and proven practitioner resources to address the research problem.	Proposes state-of-the-field design and development methods consistent with established practice and within reach of practitioner resources to address the research problem.	Proposes design and development methods not completely consistent with established practice or possibly outside the reach of practitioner resources to address the research problem.	Proposes design and development methods inconsistent with established practice or not a suitable match for practitioner resources to address the research problem.	
Writing Mechanics	No errors related to organization, grammar and style, and citations	Minor errors related to organization, grammar and style, and citations	Some errors related to organization, grammar and style, and citations	Major errors related to organization, grammar and style, and citations	