

[PROJECT TITLE HERE]  
The Data Mine – Project Charter

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# 1. Project Name

## 2. Project Purpose Statement

*Please outline the primary goal or intent of this project-*

- *Example#1: "The purpose of this project is to Reduce aviation cyberattack severity by ensuring a strong and secure network topology with micro segmented firewall encryption policies that will eliminate the risk of lateral data exfiltration."*
- *Example#2: "The purpose of this project is to build a predictive analytics model using historical sales and demographic data to forecast future demand. This will enable the organization to optimize inventory management, reduce wastage, and improve operational efficiency."*

## 3. Project Description

*Please add brief overview of the project.*

- *Example: With a staggering 15000% increased cyber-attack in just one year span (2017-2018) and a 3.5% annual growth rate in air transport passenger; still only 35% airlines and 30% airports think they are sufficiently safe. 97% of the most dreadful attack happened for outdated web software and 33% of the software didn't have any data encryption for outgoing traffic. 73% of the organization have at least one application in cloud but 50% companies don't even know what kind of IT device are connected in their network.*

## 4. The Data Mine Representatives Assigned

*Please add the names of The Data Mine representatives assigned to your project.*

**TDM Contact person name:**

## 5. Project Owner / Mentors / SME (Subject Matter Expert)

First Name	Last Name	Job Title	Email
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## 6. Project Objectives

*Describe couple of clear objectives for this project.*

- *Purpose-Driven: Clearly state the problem or opportunity being addressed.*
- *Outcome-Focused: Specify measurable goals (e.g., increase efficiency, reduce costs).*
- *Aligned: Tie to business or research value for relevance.*
- *Scope-Defined: Include methods, datasets, or timelines if possible.*
- *ROI: What could the project derive that would give you a return on your investment? (hiring pipeline, cost/time saving, education upskilling)*

## 7. Data Description

*Please provide information for the below points:*

- **Data Type and Format**

*Define the type and format of the data that will be used in the project (e.g., CSV files, JSON, XML, images, videos, audio, database files, logs, text documents).*

- **Purpose and Handling**

*Clarify why the data is needed, how it will be used in the project, and whether it will be shared or accessed by others. Include details about any required preprocessing, such as cleaning or formatting, to prepare the data for use.*

- **Storage Location**

*Specify where the data will be stored, whether on local devices (e.g., company laptops) or cloud infrastructure (e.g., Azure Data Lake, AWS, Purdue Resources).*

- **Estimated Data Volume and Growth**

*Provide an approximate size of the data and include any expectations regarding data growth or expansion over time. (e.g., 100s of gigabytes)*

## **8. Technical Requirements**

- *Please add tools, technologies and methodology to be used in the project.*
- *Please share details of any training required for the students prior to project kickoff.*

## **9. Background & Preparation**

- *What material should the student review to understand project?*
- *Please provide relevant links here including video, literature, etc. This content will be expected of the students to review during the first two sprints (4 weeks).*

## **10. Documentation**

- *What are your documentation expectations?*
- *Students will do technical Specifications as part of their Professional development (Documentation Format [Wiki, Github ReadMe, Google Docs, etc])*
- *What would be the documentation frequency [e.g., Every Sprint]?*
- *What are your code management expectations? [The Data Mine can support the management of a Github repository at your request]*

## 11. Data Security & Boundaries

- *Is there any sensitive data? (specific classification – this is included on the sponsor acknowledgement). ITAR, HIPAA, FERPA, UCI etc..*
- *What type of data will your team work with? [public, private, internal, etc]*
- *Does your team have any proprietary code that is owned by the company?*
- *What data security guidelines do you have for your team?*
- *Limitations on what data can/can't be used for.*

## 12. AI Use Scale

Scale Selected:

Please choose one of the AI scales for your project. Use the below table to decide the right scale as per your requirements. For more details on AI Assessment Scale (AIAS) please visit <https://arxiv.org/pdf/2312.07086>

<input type="checkbox"/>	No AI	The project is completed entirely without AI assistance. This level ensures that students rely solely on their knowledge, understanding, and skills. <b>AI must not be used at any point during the assessment.</b>
<input type="checkbox"/>	AI-Assisted Idea Generation and Structuring	AI can be used in the project for brainstorming, creating structures, and generating ideas for improving work. <b>No AI content is allowed in the final submission.</b>
<input type="checkbox"/>	AI-Assisted Editing	AI can be used to make improvements to the clarity or quality of student created work to improve the final output, but no new content can be created using AI. <b>AI can be used, but your original work with no AI content must be provided in an appendix.</b>
<input type="checkbox"/>	AI Task completion, Human Evaluation	AI is used to complete certain elements of the task, with students providing discussion or commentary on the AI-generated content. This level requires critical engagement with AI generated content and evaluating its output. <b>You will use AI to complete specified tasks in your project. Any AI created content must be cited.</b>
<input type="checkbox"/>	Full AI	AI should be used as a “co-pilot” in order to meet the requirements of the assessment, allowing for a collaborative approach with AI and enhancing creativity. <b>You may use AI throughout the project to support your own work and do not have to specify which content is AI generated.</b>

## 13. Implementation Plan

1. *Provide a roadmap/timeline of how the project will be executed.*
2. *Outline key milestones and objectives for the team to create.*
3. *Please budget time for team bonding and student learning*

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*Provide monthly milestones; where do you hope students to be at the end of each month?*

- August (6 days): Introduced to mentors and familiar with project, has reviewed this document.
- September:
- October:
- November:
- December (13 days): Students share first semester findings in the form of a presentation. The technical work is...
- January (20 days):
- February:
- March:
- April:

Key Academic Dates	Fall 2025	Spring 2026
First Class Day	August 25	January 12
Holidays / Breaks	September 1 October 13-14 November 26-29	January 19 March 16-21
Last Class Day	December 13	May 2

## **14. Notes and Additional Information & Attachments**

*Provide any other relevant details, add attachments, such as any dependencies, historical context, or additional context regarding the project's scope and execution.*