

Data Analytics Immersive

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# Introduction to Capstone Project

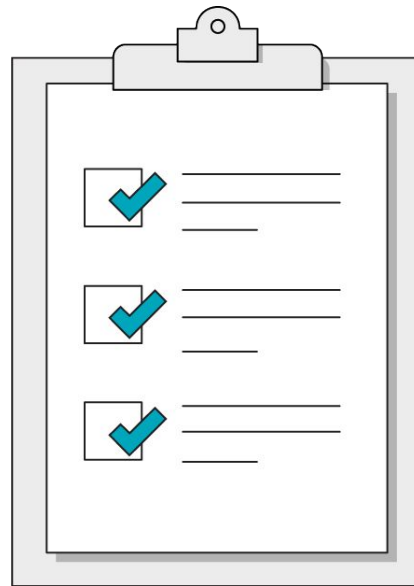
*Unit: Capstone projects*

# Learning Objectives

In this lesson, we'll:

- **Understand** Capstone project deliverables and expectations.

**Any questions?**



# Agenda



Review and Ask Me Anything



Capstone project introduction



Wrap up and Q&A

Introduction to Capstone Project

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# Ask Me Anything





**Analytics  
Fundamentals**



**Excel**



**SQL**

**Tableau**

**Python Programming**

**Power BI**

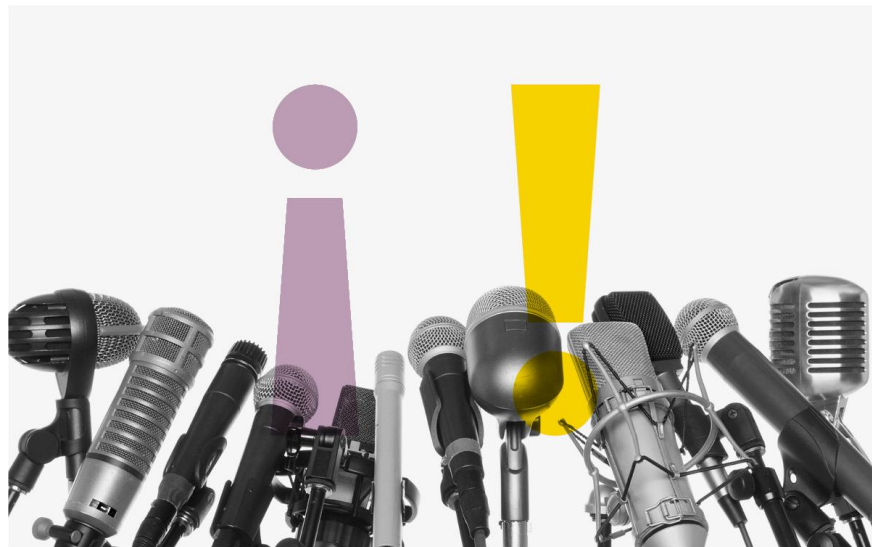


Discussion:

# Ask Me Anything

**What's still puzzling you about anything we've covered so far?**

**Now's the time to ask!**



**Here it is.**



**The moment you've all been waiting for.**







Introduction to Capstone Project

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# Capstone Introduction



# Capstone Project

The Capstone project is the final project for the Data Analytics Immersive. It is the culmination of your time at GA!



# Capstone Deliverables

1

Topic Options

2

Topic Proposal and Data Set

3

Report and Technical Analysis

4

Non-Technical Presentation

# Capstone Deliverables

1

## Topic Options

**Deliverable:** A presentation with a maximum of **five** slides.

- Provide an overview of topic options for your Capstone project.
- You can have between 2 and 4 topic options.
- For each option, have a statement of the problem that you want to solve and an overview of your approach to solving that problem.
- Outline where you have data, or where you can get it from, for each option.
- Present your topics to the class in a 'Lightning Talk.'
- The outcome of this presentation is that you should know which topic you'll be doing.

# Capstone Deliverables

2

## Topic Proposal and Data Set

**Deliverable:** A presentation with a maximum of **ten** slides.

- Provide a clear statement of the problem that you want to solve and an overview of your approach to solving that problem.
- Summarize your objectives, goals and success metrics, and any risks and assumptions.
- Outline any proposed methods and techniques you have.
- Your data should be in hand by this point in the process!

# Capstone Deliverables

3

## Report and Technical Analysis

**Deliverable:** Consider delivering a combination of SQL queries, data files, a Jupyter notebook and an interactive dashboard in Tableau.

- Develop a technical report that can be shared among your peers. It should include:
  - Problem, goals and audiences
  - Data sources and definitions in a data dictionary
  - Patterns, trends and insights
  - At least one predictive model
  - Recommendations and next steps.

# Capstone Deliverables

4

## Non-Technical Presentation

**Deliverable: Ten-minute** presentation of your findings with a non-technical audience in mind.

- Come up with a detailed slide deck or interactive demo (or both) that explains your data, visualizes your analysis, describes your approach, articulates strengths and weaknesses, and presents specific recommendations.
- You will present your deck to the class and a select audience of non-technical audience for **ten minutes**. Be prepared to explain and defend your presentation to an inquisitive audience!



# Requirements

You will be graded against the following rubric:

- Incomplete (0)
- Does Not Meet Expectations (1)
- Meets Expectations (2)

You must complete **all four** sections with a grade of “Meets Expectations” to graduate.

# Rubric - Summary

*See the DAI\_Capstone\_Project\_Guidelines doc for detailed instructions*

## Capstone, Part 1: Topic Options

- 2-4 possible topics are assessed.
- Feasibility of topics is assessed based on available data, the problem that is targeted to be solved, and the complexity of the analysis.
- The presentation deck is clear and effective, and equal to or less than five slides.

## Capstone, Part 2: Topic Proposal and Data Set

- Data is gathered from internal and external sources according to business requirements.
- A problem statement and an overview of an approach to solving that problem is provided.
- Objectives, success metrics, any risks/assumptions, and proposed techniques are summarized.
- The presentation deck is clear and effective, and equal to or less than ten slides.

## Capstone, Part 3: Report Writeup and Technical Analysis

- All data is cleaned and described, with redundant, duplicate, and erroneous data removed.
- Data is analyzed using statistical techniques, to identify patterns, trends, and insights.
- A predictive model is built using historical data and predictive analysis is conducted on new data sets based on the predictive model.
- The report is built based on statistical analysis and outlines all patterns, trends and insights clearly.
- The report facilitates data-driven decision making or understanding by effectively visualizing data and summarizing findings.
- At least one interactive dashboard is created and presented to provide insights to the business decisions required by the intended audience.
- A new data model is proposed or built (if required).

## Capstone, Part 3: Presentation and Recommendations

- The presentation facilitates data-driven decision making or understanding by visualizing data and clearly communicating data insights.
- The presentation is appropriately directed to the correct audience and communicated in laypeople terms.



Introduction to Capstone Project

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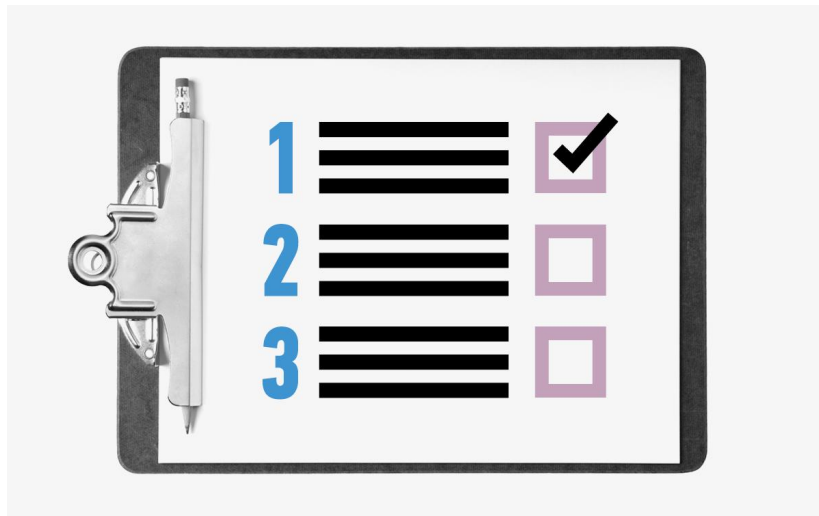
# Wrapping Up



# Recap

## Today, we:

- Understood Capstone project deliverables and expectations.



# Q&A



