

## **STATEMENT OF WORK**

*For the 2024 MSBA Cohort's Case Competition  
Experience with*

# **ABS Consulting**

## **Offshore Safety Improvement Recommendation**

**July 2024**

## Project Description

### Background:

ABS Consulting serves a wide variety of clients who operate in high hazard industrial environments. One of the challenges that our customers face is learning from safety incidents in order to reduce future environmental impacts, injuries, and fatalities. Incidents are usually reported in great detail, but text descriptions are difficult to interpret in aggregate. This makes it difficult to understand broad trends and to recommend actions to improve safety. In the past, our engineers have painstakingly reviewed and categorized historical incidents to enable assessment of top risks and make recommendations. Today, Natural Language Processing (NLP) and Large Language Models (LLMs) may allow aspects of this review to be automated, speeding up the assessment process. For the purposes of this project, you are welcome to use LLMs as a tool, provided you document *how* they were utilized. Additionally, follow all University/Haslam/Instructor guidelines for AI usage.

### Objectives:

- Identify factors driving safety incidents in the offshore industry.
  - Consider potential incident causes (especially equipment vs. human vs. other causes)
  - Consider searching for keywords in incident descriptions
  - Evaluate findings from text-based data columns vs quantitative or categorical data columns
- Identify trends driving major incidents (fatalities, injuries).
  - Segment the data based on the severity of incidents
  - Compare trends in severe incidents versus non-severe incidents
- Recommend top opportunities for improvement in offshore safety management.
  - Consider findings from your analysis
  - Consider balancing findings with literature on the subject

## Data Description

Offshore Incident Statistics Published by the Bureau of Safety and Environmental Enforcement (BSEE) <https://www.bsee.gov/stats-facts/offshore-incident-statistics>. Please use data from 2013 FY – 2022 CY (all available Excel files).