



**College of Professional Studies  
Northeastern University San Jose**

**MPS Analytics**

**Course: ALY6080**

**Assignment:**

Module 3 – XN Project: Digging Deeper

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**Submitted to:**

Prof: VENKATA DUVVURI

**Submitted by:**

ARCHIT BARUA

HEEJAE ROH

NIKSHITA RANGANATHAN

SHYAMALA VENKATAKRISHNAN

## 3DHEALS INITIAL DATA ANALYSIS

### **Abstract**

This paper outlines the data preparation, tasks completed, tasks remaining, and plan to complete those tasks for a project involving a comprehensive analysis of Excel files provided by the sponsor, 3Dheals. Our group utilized Excel, Python, Tableau, and Microsoft PowerPoint to conduct data merging and cleaning, ascertain the most critical files, and identify and pre-process NA data. The primary objective is to determine and finalize the key business question, with continuous information gathering and accumulation to enhance knowledge until an intuitive understanding of the enterprise is achieved. The preferred method of communicating the results from initial EDA was through Tableau and Microsoft PowerPoint, with consideration of sponsors' preferences for future communication of results.

*Keywords:* 3Dheals, data preparation, Excel, Python, Tableau, Microsoft PowerPoint, business inquiry, data visualization, communication

### **Q. How are you addressing data preparation?**

Our group has successfully identified 18 distinct product Zoom meeting folders, categorized by season, through a comprehensive analysis of Excel files. Each Zoom meeting was located in a specific folder, bearing the name of the corresponding product, and contained crucial reports - 'Attendee Report', 'Performance Report', and 'Q\_A Report'. To efficiently comprehend the data, we merged the excel data into a single file in order to examine the data from the viewpoint of an annual period.

### **Q. What tasks did you complete?**

Initially, we prioritized the identification of the most critical files. Considering the educational and relationship-concentrated nature of 3Dheals, our group determined that the Attendee Report was the paramount resource, as it provided insights into business inquiries. Subsequently, utilizing Python, we attempted to ascertain the NA data in our dataset and pre-process it. Our efforts uncovered '--' data in the 'Join Time', 'Leave Time', 'Time in Session (minutes)', and 'Is Guest' columns, which we identified and treated as NA data, facilitating the more precise processing of the dataset.

### **Q. What tasks are left to be done?**

Our foremost objective is to identify the pertinent business inquiries that need to be addressed. To achieve this, we are continually gathering and accumulating information about the company. Our aim is to enhance our knowledge until we attain an intuitive understanding of the enterprise, which will enable us to make informed decisions. In this regard, we intend to re-examine the data to gain a deeper insight into the business questions. We will assess the dataset to identify any missing

components or novel perspectives that may be uncovered. Finally, you will be empowered to determine which analytical tools should be employed to resolve your business inquiries.

**Q. What is your plan to complete these tasks?**

In the preliminary phase, our primary focus will be to determine and finalize the key business question. We will undertake a comprehensive review of the data provided by the sponsor, utilizing both Excel and Python. Through a collaborative process of discussion, we will ascertain the most suitable analysis tool to be employed. Our analysis will facilitate the identification and resolution of business inquiries that will benefit the sponsor. Subsequently, we will evaluate the results to determine whether additional analysis is needed. Should it be necessary, we will commence a secondary analysis, revisiting the initial stages of the process.

**Q. What are the preferred methods of communicating the results from your initial EDA?**

Upon completion of the data merging and cleaning process, we leveraged Tableau for data visualization purposes. Thanks to its exceptional capacity to seamlessly present geographical information, we were able to easily visualize data pertaining to the participating countries of the attendees, as provided by the Sponsors. Our goal was to effectively deliver this information in a polished and professional business format, which we achieved through the use of Microsoft PowerPoint.

**Q. How do you plan to communicate results of tasks yet to be complete?**

Our initial consideration will be to determine the Sponsors' preferences regarding the presentation of the data. This could be in the form of a comprehensive report or a condensed summary format. In cases where additional visual aids are necessary, we may utilize infographics to effectively communicate the information provided by the Sponsors, making it easily accessible immediately.

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