

# **School of Bus, IT & Management**

CAPSTONE TERM 2

AIDI 2005-02

**Winter 2020**

## **AIDI\_Project Objective**

***An Intelligent Customer Support and Feedback System With  
Sentimental Analysis***

### **Due:**

January 24, 2020 5:00pm

### **Submit to:**

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## **Introduction**

In this competitive business environment, customers are more demanding, with more power and expectations than ever. Customer happiness is considered a key driver for any organization to grow its operations, and maximize its revenue at an optimum level. Therefore many organizations are recognizing the importance of utilizing big data technology to better understand their customers and the factors that drive their satisfaction.

Incorporating artificial intelligence driven solutions enables companies to become more customer centric by analyzing unstructured data, highlighting key customer information and have it immediately accessible to decision makers.

The project will utilize Natural Language Processing (NLP) to cluster customers and classify if a customer is happy, neutral or angry, and be able to match a customer service representative to keep the customer pleased. In a nutshell this project is not utilizing AI to replace customer support teams, but using AI technology to make customer support more effective, and data driven.

## **Problem Statement**

The objective of this project is to design and develop an intelligent customer support algorithm with sentimental analysis that will help a business serve their customers effectively while lowering support costs, and increasing customer loyalty. The below points define the key problems the project is trying to address throughout the project development life cycle:

- Gaining better insights and understand the factors that influence the customer opinions about a product and/or a service;
- Enhancing customer service processes by bringing customer feedback from multiple channels, into a single data lake to analyze;
- Eliminating the time required to analyze customer sentiment and provide decision makers with real time insight on customer analytics.

## **Rationale Statement**

To remain competitive, companies are required to maintain a high customer engagement and satisfaction level, where all of their strategies and long-term investment need to be driven by data insight generated from the feedback they receive.

Analyzing customer feedback and generating useful insights can be very difficult and overwhelming. Therefore, this project will provide a tool powered by AI to better analyze customer feedback and better predict customer sentiment to help organizations maintain their customers.

The project will enable leading companies to exceed customer expectations by identifying the patterns and trends in their behaviors for which can be used to make an impact influencing future investments and strategic initiatives.

## Business Requirements

No.	Requirement Type	Requirement	Comments
1	Business	A fully connected AI solution that can analyze customer sentiment and provide customer analytics to support decision making	
2	Business	The AI Solution should predict if a customer is happy, neutral or angry based on their feedback	
3	Technical	The AI Solution should display the customer sentiment and analytics on a dashboard that is user friendly	
4	Technical	The AI solution shall be able to receive data from multiple data source	
5	Technical	The AI solution should be able to perform sentiment analysis on voice and text datasets	Text is Mandatory where Voice is optional due to the availability of datasets
6	Technical	The AI solution should support real-time data processing (e.g twitter data)	
7	Technical	The AI Solution should be able to learn new data by itself	Optional

## Key Metrics

1. The AI solution should be able to correctly predict customer satisfaction;
2. The AI Solution should provide end users with access to quantitative and qualitative insights;
3. The AI Solution should visibly display all the customer analytics on a dashboard.