**Stakeholders:**

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| --- | --- | --- | --- |
| **Stakeholder** | **Interests** | **Estimated Project Impact** | **Estimated Priority** |
| Owner | Achieve targets  Liability (avoid all costs)  increase sales margin | High(7) | 1 |
| Sponsor | Successfully addresses needs of adjunct customer  Provides new market to expand ventures | Low(4) | 3 |
| Team Members | New product excitement  Demand end-of-year bonus  retain and expand skill level | High(8) | 2 |
| Project Manger | Achieve targets  Respect of team members  Target achievement bonuses | High(9) | 4 |
|  |  |  |  |

**Executive Summary:**

The customer is expecting a Machine Learning Framework to take data, clean it, process and analise the data and through different algorithms recognize pattern showcasing emotional queues which will help determine Mental health issues. We will like provide an approach by using different ML models to solve this problem and have the framework built using python to keep the code base fairly straight forward.

**Project Scope:**

For the Scope of this project, our team will be handling:

* Backend of the project
* Data cleaning
* Data Management
* Data Security
* Backend Maintenance
* Deployment:

**Business Drivers:**

As the modern world has made life a lot easier and increased life expectancy drastically over the years. The current society if plagued by Mental health issues. There was a social stigma attached to asking for help for mental health issues in the past. This Stigma is slowly dissipating away in today’s world as more and more people recognize that, and are looking for help. This inspired us to provide some help using the our technological background to these people.

**Some data:** WHO states that there is a huge shortage of Mental health professionals in India. As there are only 0.3 psychiatrists 0.12 nurses 0.07 psychologists per 100000 people in india

WHO also predicts that in the year 2021 at least 20% of Indians will be suffering from a form of mental illness.

India accounts for about 36.6 % of suicides globally.

Even with this situation the avenues for mental help in India are quite limited. We are aiming to provide a Machine Learning platform to the various institutions to provide a supplementary help to their members. A framework that hospitals can also use to balance workloads of already overworked psychiatrist and psychiatrist.The above numbers show and obvious demand for our product

**Project Overview and Objectives:**

With this project we aim to build a backend framework which will be written in Python and will be using various python libraries.

**Project Description:**

**Real Data**: We will be gathering real data by doing surveys with the help of google forms initially. As we grow will move to more professional data gathering alternatives like Globalme or LionBridge AI. This initial data will be sufficient for the grass-root stages of the project and will also be cost effective.

**Data Cleaning**:The next step will be to clean the gathered data to make it usable. This process will make the data gathered more relevant to our project. The cleaning will be done by removing NAN and useless data. Data cleaning could affect the finish date of the project.

**Encoding data**: Next we will need to encode all the cleaned data make it numeric for the program. Different methods will be used to convert row data into meaning full resource:

* Scaling
* fitting
* tuning
* Creating a Covariance Model

**Evaluating Models**: Finally we get to the Evaluation step. Here we will be using different algorithms to process and use the data to make a prediction model.

The algorithms we will be using

* K’s nearest neighbour
* Decision tree
* Random forest
* Logistic regression
* Bagging
* Boosting
* Stacking
* Predicting with neural networking: we will be using tensorflow library for this
* Creating prediction on dataset