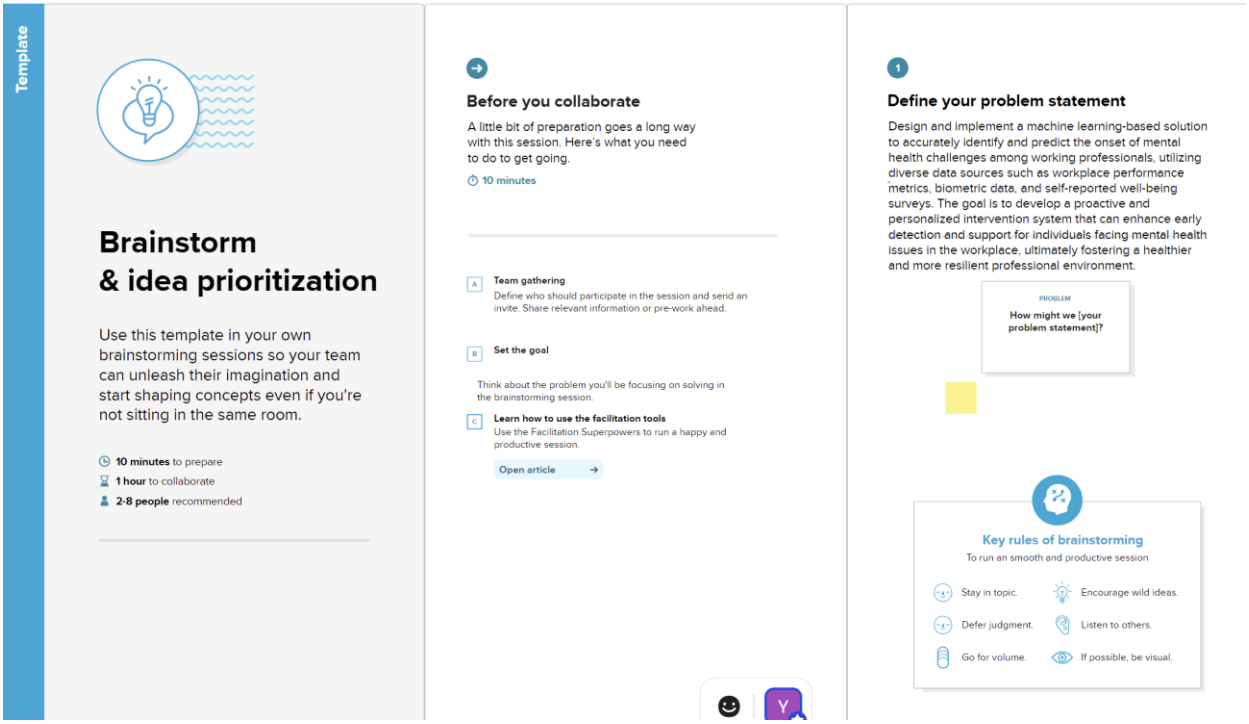
Ideation Phase
Brainstorm & Idea Prioritization Template

Date	18 October 2023
Team ID	Team-593201
Project Name	Predicting Mental Health Illness Of Working Professionals Using Machine Learning
Maximum Marks	4 Marks

Brainstorm & Idea Prioritization Template:

Mental Health First Aid teaches participants how to notice and support an individual who may be experiencing a mental health or substance use concern or crisis and connect them with the appropriate employee resources. Employers can offer robust benefits packages to support employees who go through mental health issues. That includes Employee Assistance Programs, Wellness programs that focus on mental and physical health, Health and Disability Insurance, or flexible working schedules or time off policies. Organizations that incorporate mental health awareness help to create a healthy and productive work environment that reduces the stigma associated with mental illness, increase the organizations' mental health literacy, and teaches the skills to safely and responsibly respond to a co-worker's mental health concern. The main purpose of the Mental Health Prediction system is to predict whether a person needs to seek Mental health treatment or not based on inputs provided by them.

Step-1: Team Gathering, Collaboration and Select the Problem Statement



Step-2: Brainstorm, Idea Listing and Grouping

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Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.

20 minutes

TIP

Add customizable tags to sticky notes to make it easier to find, browse, organize, and categorize important ideas as themes within your mural.

Data Collection

Gather data related to mental health illness of working professional, family history, work interfere, care options , wellness programs, and coworkers.

Acquire datasets for mental health interview , physical health interview and mental vs physical health interview.

Model Building

Logistic Regression

Explore various machine learning classification algorithms, including:

Decision Tree
Support vector machine

Creating User Interface

Design a user-friendly interface for predictions.

Implement input fields and output field for treatment.

Feature Engineering

Create relevant features.

Transform or encode categorical variables as needed

Handle missing data if any.

Data Visualization

Create visualizations to understand the relationships between input features and resource allocation.

Use Matplotlib, Seaborn, or other visualization libraries.

Feedback Iteration

Use user feedback to make improvements and updates to the system.

Outlier Detection and Treatment

Identify and handle outliers in the dataset

Implement strategies like removing outliers or transforming data.

Performance Testing

Assess the model's performance on test data.

Investigate model bias, variance, and accuracy.

User Testing

Invite users to interact with the interface and provide feedback.

Documentation

Create documentation detailing the project, data sources, methodologies, and user interface usage.

Data Preprocessing

Normalize or scale numerical features.

Split data into training and testing sets.

Integration with Flask or streamlit

Choose a web framework (Flask or Streamlit) for creating a user interface.

Deployment and Monitoring

Deploy the model and user interface.

Continuously monitor the system's performance

Final Testing

Perform a final round of testing to ensure the system's stability and accuracy.

Model Deployment

Prepare the selected model for deployment

Best Model Selection

Evaluate model performance using metrics like Accuracy Score, Confusion matrix, AUC-ROC curve , Classification report.

Also analyse the cross tab for more detailed information on each and every model built.

Select the best-performing model for predicting mental health illness of working professional.

Step-3: Idea Prioritization

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Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

20 minutes

TIP

Participants can use their cursors to point at where sticky notes should go on the grid. The facilitator can confirm the spot by using the laser pointer holding the **H key** on the keyboard.