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| Mental Health Prediction Using Machine Learning |
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| Introduction Mental health is a crucial part of our overall well-being, yet many people struggle to get a proper diagnosis due to the stigma around mental health and the difficulty of accessing services. Mental illness is likely the biggest challenge affecting people’s emotions, thoughts, and social interactions today. It influences how we feel, think, and behave. To address this, we need tools that use data and algorithms to help make accurate clinical diagnoses. By gathering feedback on symptoms like depression, fatigue, sleep problems, and thoughts of suicide, system can identify potential mental disorders and recommend whether the user should seek professional help. Problem Statement Issues of depression, anxiety and stress are becoming common among people rather than individuals suffering from them only; however, they impact on their quality living standards within a community setting (i.e. Within families where parents are always busy working). Therefore, conventional approaches which rely on self-reported data obtained through clinical interviews often lack timeliness or accuracy hence making it necessary to have a machine learning model to predict and suggest the diagnosis. Hypothesis  * Younger individuals are more likely to report feeling nervous, anxious, or experience panic attacks compared to older individuals * Individuals who have trouble concentrating are also likely to report trouble sleeping. * Individuals who are having trouble with work are more likely to feel hopeless and tired. * People who feel hopeless are more prone to feelings of anger and overreacting in situations. * People addicted to social media are more likely to experience negative emotions, such as anxiety and depression. * Recent weight gain is associated with increased stress and potential depressive symptoms. * Introverts are more likely to avoid social activities and report feeling stressed in social situations. |

**Questionnaire**

* How old are you?
* Do you feel often nervous?
* Do you feel often panic?
* Do you get sudden bursts of rapid breathing?
* Do you get sudden bursts of excessive Sweating?
* Do you have trouble concentrating
* Do you have trouble sleeping?
* Are you having trouble with work?
* Do you feel hopeless?
* Do you feel angry?
* Do you overreact?
* Have you changed your eating pattern?
* Do you ever get suicidal thoughts?
* Are you always tired?
* Do you have a close friend(s)?
* Are you addicted to social media?
* Have you gained weight recently?
* Are you an introvert?
* Do you ever get pop ups of a stressful memory?
* Do you frequently experience nightmares?
* Do you often avoid people or activities?
* Do you often find yourself feeling negative?
* Do you have trouble focusing on a task?
* Do you often blame yourself for an unfortunate event?
* Do you ever get hallucinations?
* Do you exhibit repetitive behavior?
* Do you get seasonal depression?
* Have you recently experienced an increase in energy?

**Tools and Technologies:**

* **Programming Language:** Python
* **Development Environment:** Jupyter Notebook, Google Colab

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| User Interface (UI) |

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| - Home Page |

| - Questionnaire Page|

| - Results Page |

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| Data Collection |

| Module |

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| - Google Forms |

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| Data Processing |

| Module |

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| - Google Sheets |

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| Machine Learning |

| Model |

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| - Model Training |

| - Prediction |

| Generation |

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| Results Generation |

| Module |

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| - Mental Health |

| Condition Info |

| - Treatment |

| Recommendations |

| - Links for More |

| Information |

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| Data Storage |

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| - Excel Sheets |

**User Interface (UI)**

* Home Page
* Questionnaire Page
* Results Page

**Data Collection**

* Google Forms

**Data Processing Module**

* Google Sheets

**Machine Learning Model**

* Model Training
* Prediction Generation

**Results Generation Module**

* Mental Health Condition Info
* Treatment Recommendations
* Links for More Information

**Data Storage**

* Excel Sheets