

# HACKNIGHT 1.0: DARKKNIGHTS

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## Holistic View:

Our model achieved an accuracy of 83%. To explore the data and exploit them with the model, we have the following UI that supports user entry, realtime prediction, search result for particular employee record and dashboard with analysis of all the data.

The whole project is deployed on Azure : <http://40.71.35.124:8000/>

Tech Stack: Python, Flask, JQuery, HTML, CSS, Javascript, Material Design Library, Uber Ludwig

The user interface consists of the following views:

## 1. USER ENTRY

A user can enter their details in the form to get live prediction if treatment is required or not.

The form consists of 2 parts:

**a) Mandatory User Details** – contains the fields to be compulsorily filled by the user to get the prediction. Helps user get the prediction on the basis of top contributing features.

**b) Additional User Details** – contains optional parameters to be filled by the user to get the score. It helps improve the accuracy of the prediction.

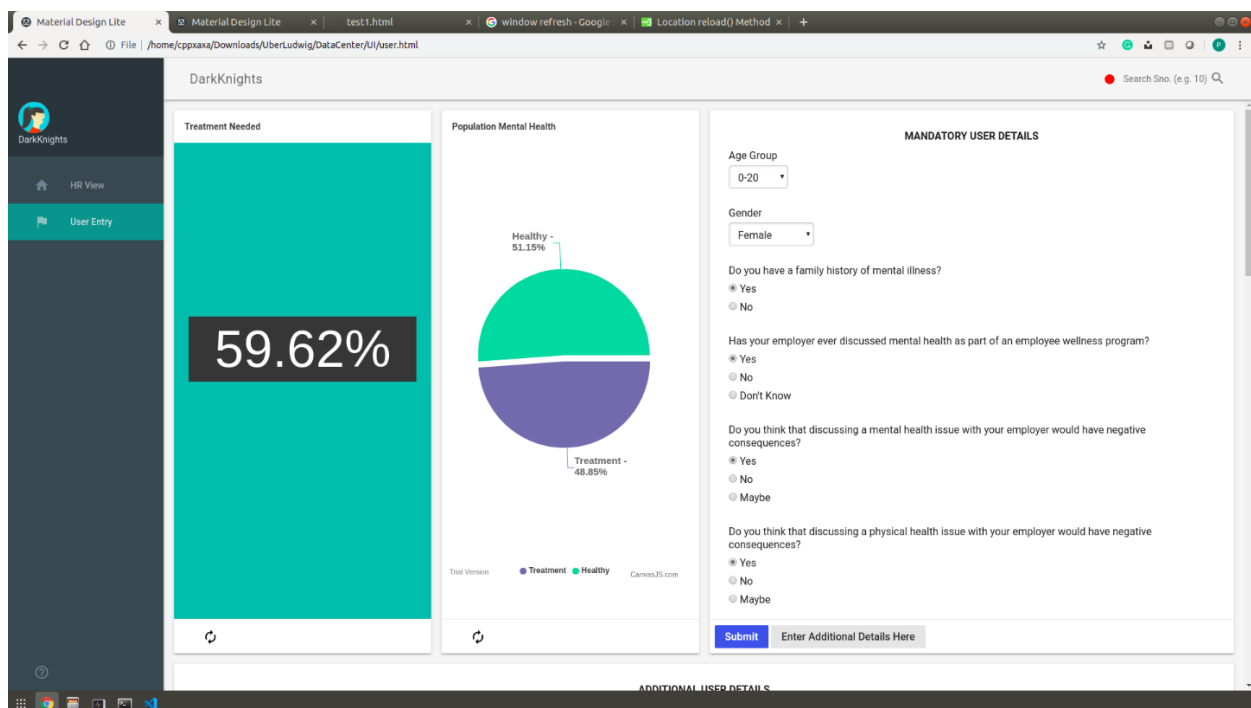


Fig 1. User Entry: Mandatory User Details form

The screenshot shows a web browser window with the URL `/home/cppaxa/Downloads/UberLudwig/DataCenter/UI/user.html#Additional_Data_Grid`. The application is titled "DarkKnights" and has a sidebar with "HR View" and "User Entry" (selected). The main content area is titled "ADDITIONAL USER DETAILS" and contains the following form elements:

- Country:** A dropdown menu with "Australia" selected.
- Are you self-employed?** Radio buttons for "Yes" (selected) and "No".
- If you have a mental health condition, do you feel that it interferes with your work?** A dropdown menu with "Never" selected.
- How many employees does your company or organization have?** A dropdown menu with "1-5" selected.
- Do you work remotely (outside of an office) at least 50% of the time?** Radio buttons for "Yes" (selected) and "No".
- Is your employer primarily a tech company/organization?** Radio buttons for "Yes" (selected) and "No".
- Does your employer provide mental health benefits?** Radio buttons for "Yes" (selected), "No", and "Don't Know".
- Do you know the options for mental health care your employer provides?** Radio buttons for "Yes" (selected), "No", and "Not sure".

Fig 2.1: User Entry: Additional User Details Form

The screenshot shows the same web browser window as Fig 2.1, but with the form scrolled down to reveal additional questions:

- Would you be willing to discuss a mental health issue with your direct supervisor(s)?** Radio buttons for "Yes" (selected), "No", and "Some of them".
- Would you bring up a mental health issue with a potential employer in an interview?** Radio buttons for "Yes" (selected), "No", and "Maybe".
- Would you bring up a physical health issue with a potential employer in an interview?** Radio buttons for "Yes" (selected), "No", and "Maybe".
- Do you feel that your employer takes mental health as seriously as physical health?** Radio buttons for "Yes" (selected), "No", and "Don't Know".
- Have you heard of or observed negative consequences for coworkers with mental health conditions in your workplace?** Radio buttons for "Yes" (selected) and "No".
- Comments:** A text input field with the placeholder "Enter comments here".

Fig 2.2: User Entry: Additional User Details Form

Live output of the prediction from User entered details in the form. CanvasJS is used to plot the charts.

The output consists of 2 parts:

- Whether the user needs treatment
- The confidence percentage of the prediction for the model

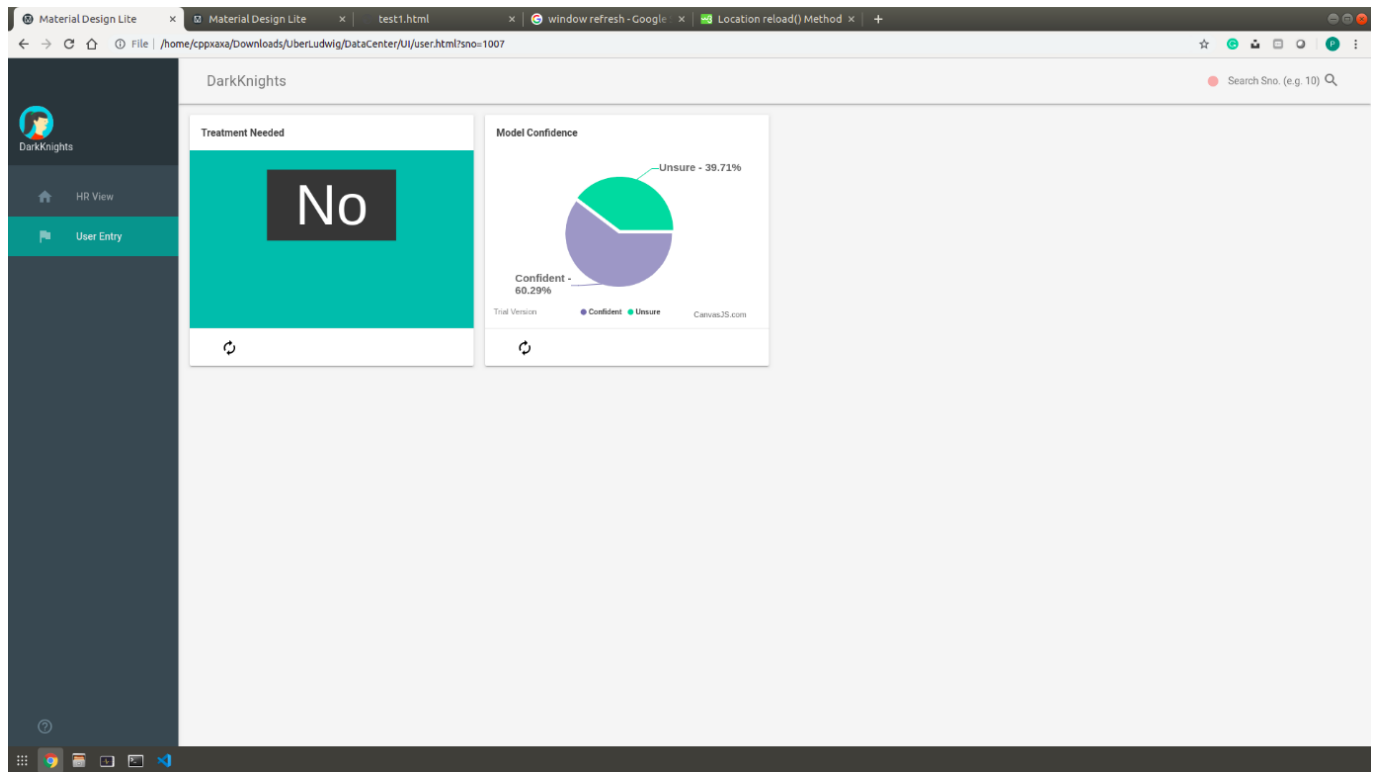


Fig 3: Output of the user entered data

## 2. HR VIEW

The HR view consists of the following components:

- **Search Bar:** The HR can search for a specific user's record based on S.No. The search bar is hinted with a blinking alert red dot.
- **Average Mental Health Index:** Consists of the Average Mental Health Index derived from the calculation of all the mental health indices of the records.
- **Population Mental Health:** Consists of the division of the healthy population and those who are advised for treatment.
- **Willingness/Openness:** Consists of the user's willingness to open up about mental and physical health issues.
- **Support from Employer:** Consists of the various ways in which the employers support employees for mental health.
- **Loaded Model Health ( 83.0116 ):** Consists of the accuracy of the model used for prediction.

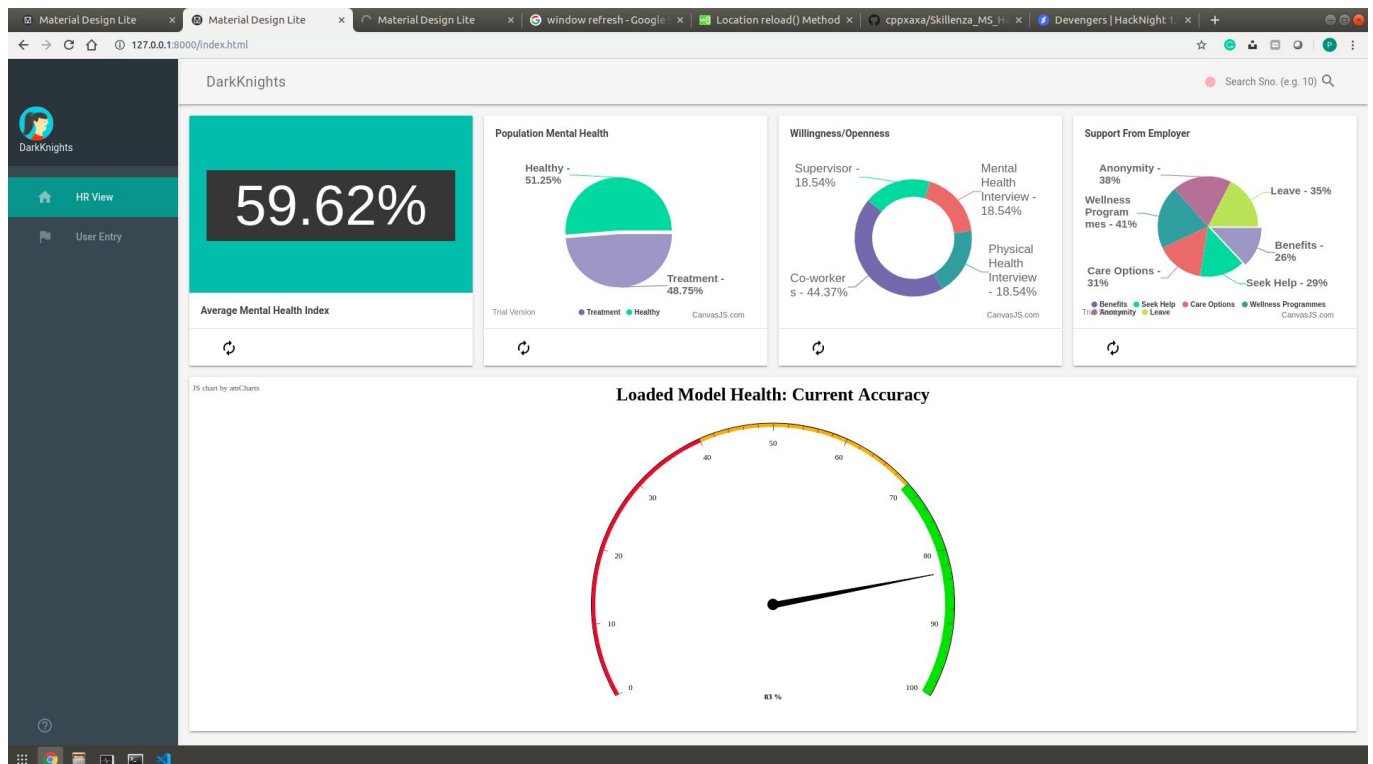


Fig 4: HR View: Consists of Searching option and analytics