



# SABER: DIGITAL DIAGNOSIS ASSISTANT FOR PSYCHOLOGIST

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## ABSTRACT

Mental illnesses have increased in recent years, especially after the Covid-19 pandemic. In Saudi Arabia, the number of psychiatric clinics is small compared to the population density. To solve the challenges face the psychologists, the system was built as a website. CNN algorithm was used with 96% of accuracy to automatically predict the appropriate diagnosis and suggest the most suitable psychological test for the patient to take.

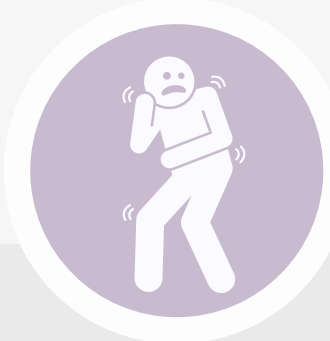
## OBJECTIVES



Expedite and facilitate the initial diagnosis with the lowest error rate.



Suggest and calculate the psychological test in seconds

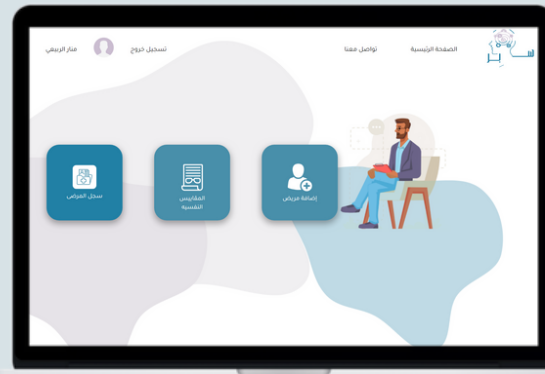


Overcome the patients fear of going to psychiatric clinic

## USER INTERFACES



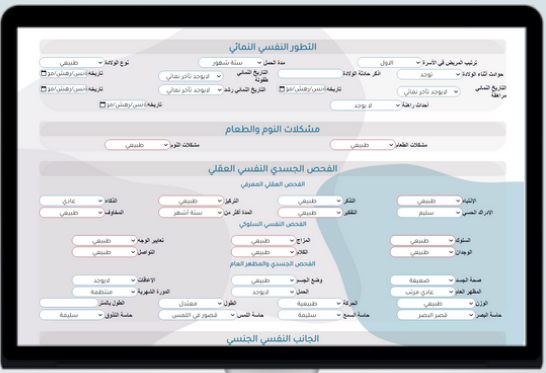
Saber's Main Page



Psychologist Home Page



Add New Patient Page



Diagnostics Page



Diagnostic Result Based on A Deep Learning



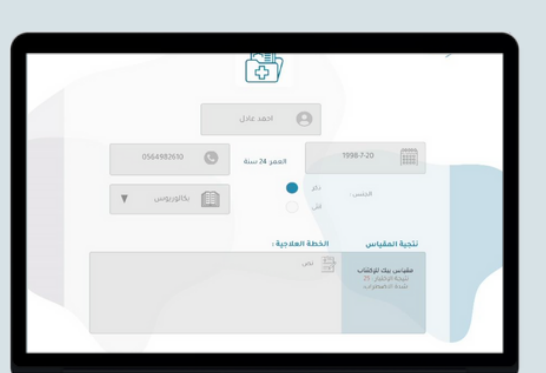
Psychological Test Questions Page



The Treatment Plan Entry Page



Patients Record Page



Patient Information Page

## REFERENCE / CONTACT



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## METHODOLOGY



Requirements

Meeting with psychologist, publishing a questionnaire to Saudi psychologists.



Analysis

Analyze and represent the system requirements in different diagrams



Design

Design the whole interfaces by using Figma



Implementation

Front-end, Back-end, Applying AI.



Test

System testing and User testing with 5 patients and 4 psychologists.

## TOOLS

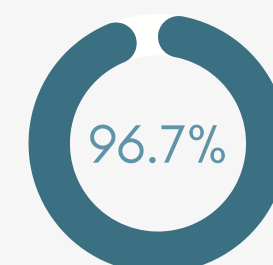
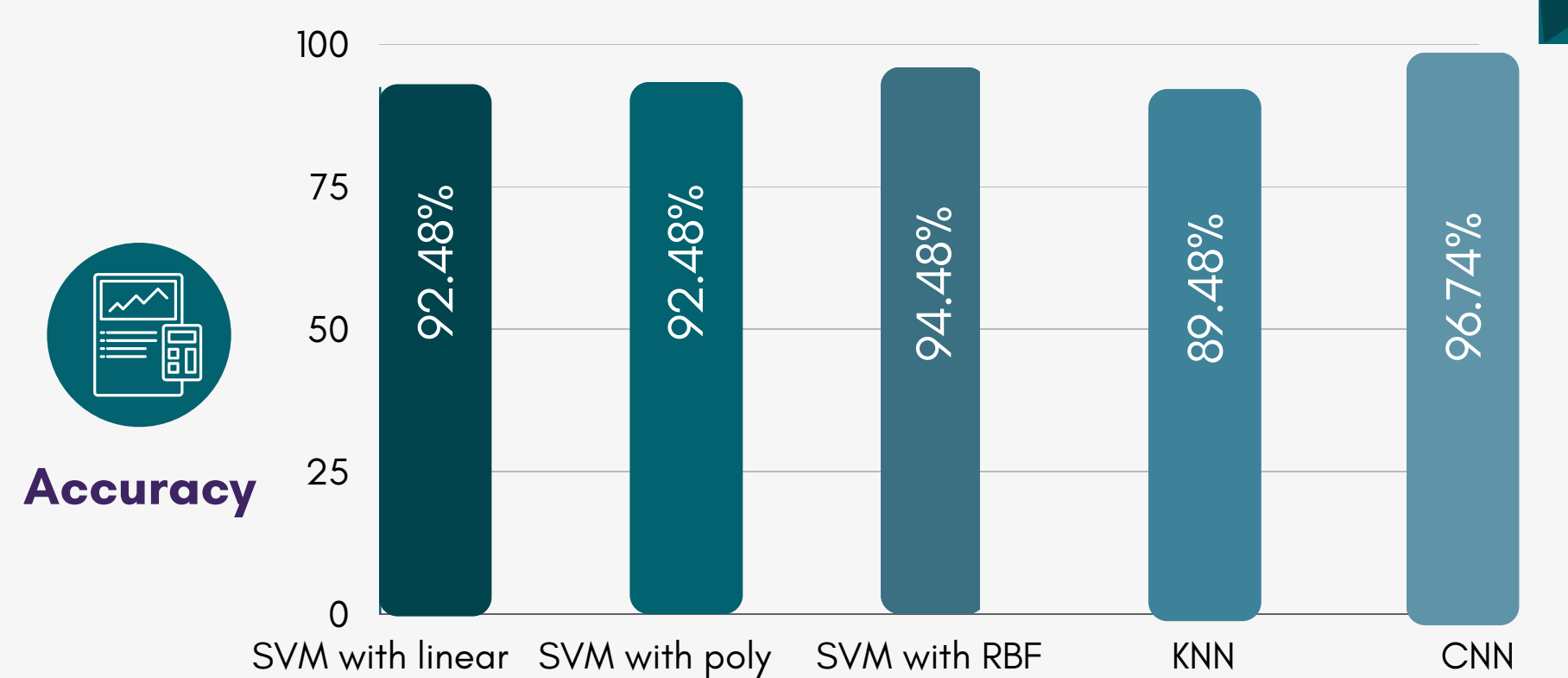


## FUTURE WORK



- Add more mental disorders
- Suggest a treatment plan by using a deep learning.

## CONCLUSION AND RESULTS



Models Evaluation showed CNN has the most accurate model with accuracy of 96.7%



System testing revealed that There wasn't any error in the mechanism of functions.



Usability testing showed that the performance was high and fast, the interfaces was clear and friendly.



Saber showed high level of effectiveness to the participated psychologists, in terms of accuracy of the predicted diagnosis.