



Suicide Risk Analysis and Prevention

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ABSTRACT:

In the present modern society the commitment of suicide is a serious public health issue. While the motives, methods and consequences of suicide are quite complicated, if people at risk of suicide can be identified and intervened in time, the loss of life can be reduced. However, suicide risk assessment is multifaceted process, the assessment of suicide risk is commonly based on the identification of person behavior or emotions. This project reveals the data for suicide risk assessment under some category such as gender, work, disease, etc. Health workers in general hospital or general health settings management helpful to assessment and immediate management. The results showed that the classification standard and evaluation model can be effectively used for the identification and discover suicide risk to reduce the occurrence of suicide. It is great significance to people's emotion care monitoring.

INTRODUCTION:

By the report released through the WHO, suicide has been diagnosed as a severe global public health trouble, as one individual dies by suicide every forty seconds globally and nearly 800,000 people die by way of suicide every annually. Suicide is the 5th leading motive of death in China, and suicide deaths in China account for extra than a quarter of suicide deaths globally. Suicide is the fourth leading purpose of death in 15-19-yr-olds Suicide does not simply arise in developed nations, but is a international phenomenon in all regions of the arena. In reality, over 77% of worldwide suicides befall in under developed and developed countries in 2019.Suicide is a critical public health trouble; but, suicides are preventable with well timed, evidence-based and regularly low-price interventions. For nations to be powerful, a complete multilevel suicide prevention method is wanted.

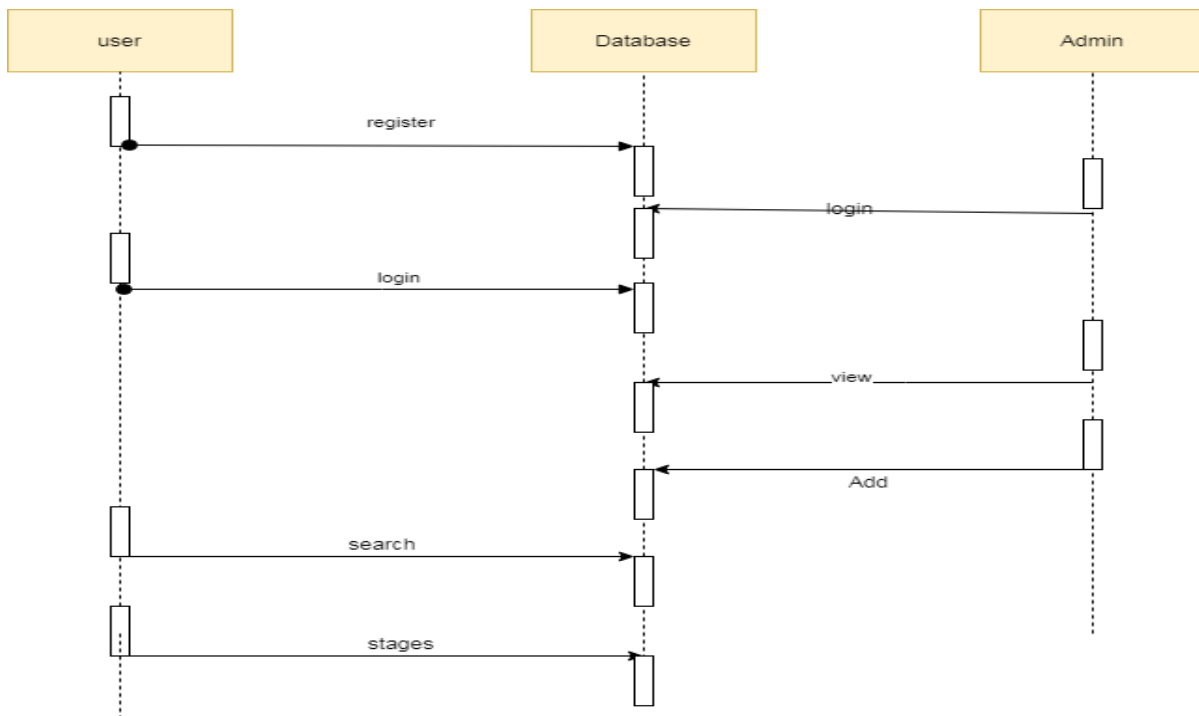
SCOPE OF THE PROJECT:

The first step inside the improvement system assigned duties for all suicide evaluation and inter- vention activities. Observe investigators evolved a short structured threat assessment. to be used with suicidal player skilled layperson facts series interviewers in its use. These interviewers were assigned obligation for detection and preliminary evaluation of suicidal acuity primarily based on take a look at questionnaire responses and responses to the brief dependent interview. In the end, on-name clinicians had been tasked with on the spot assessment and control of contributors who had been deemed at high danger by the information collection interviewers.

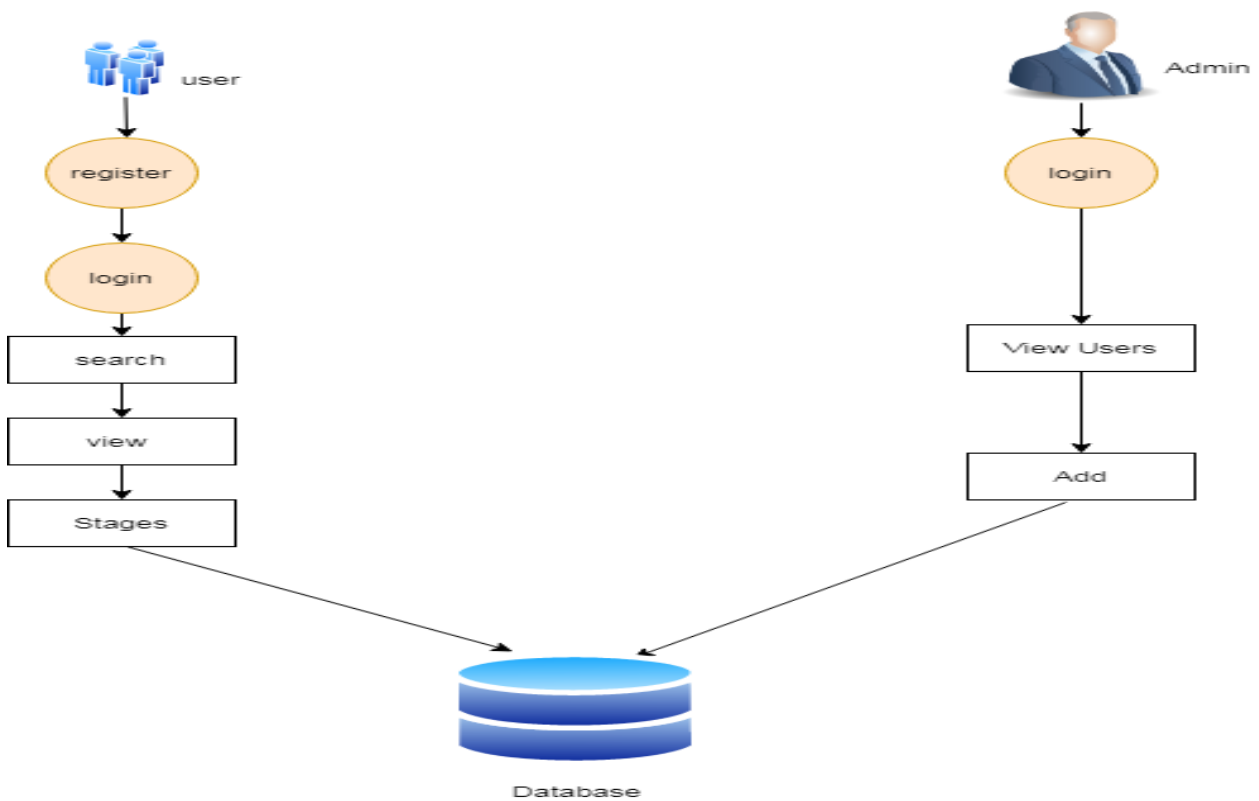
USER INTERFACE DESIGN:

That is the first module of our venture. The vital function for the character is to transport login window to consumer window. This module has created for the safety cause. In this login web page we must enter login person id and password. it is going to test username and password is correct or not (valid man or woman identity and legitimate password). If we input any invalid username or password, we will not be able to enter into login window to user window. So, we are able to prevent from unauthorized user stepping into the login window to user window. It's going to provide a very good safety for our project. So, server contain the user identity and password, server additionally test the authentication of the user. In our project we have used JSP for creating design. Here we validate the login user and server authentication.

SEQUENCE DIAGRAM:



SYSTEM ARCHITECTURE:



EXPLANATION:

The systems architect establishes the essential form of the tool, we propose a AES algorithm and we are capable of positioning a small part of data in local machine and fog server in an effort to protect the privacy. Moreover, based on computational intelligence, this algorithm can compute the distribution proportion saved in cloud, fog, and local machine respectively. Through the theoretical safety analysis and experimental assessment, the feasibility of our scheme has been hooked up, that is sincerely a powerful complement to current cloud garage scheme.

METHODOLOGY:

According to report released by the World Health Organization, suicide has been identified as a serious global public health problem, as one person dies by suicide every 40 seconds globally people die by suicide every year. The methodology of the project is to analyze the suicide risk people based on their emotions and activity. In this we have used java language to analyze the data of suicide cases. In the first step we have to create a user login page so that a new user can register in the website page. Then the data of the user who has registered is moved to the database and a new user registration notification is viewed in the admin page. Then in the admin page the admin verifies the new registered user and their account access to the website for the user and this process is done for every new user registration for the purpose of data security. Then the user will be able to login into the website. In the website's main page the user is given access to search the suicide cases in various stages.

SEARCH:

In this option the user and the admin is able to view the whole records of the suicide cases with causes, age and the particular year of male and female is displayed.

STAGE 1:

In this stage the user and the admin is able to view complete record of the suicide cases is divided into male and female records of the particular state with the particular age intervals and year.

STAGE 2:

In this stage the user and the admin is able to view the view the suicide cases in a particular year with the cause and particular age intervals of male and female.

STAGE 3:

In this stage the user and the admin is able to view the number of suicide cases in particular cause present in the dropdown of the particular year in the particular state with age intervals of male and female.

STAGE 4:

This is the last stage, in this stage the user and the admin is able to view the number of suicide committed by people in the available record. The overall factorial value is obtained by using the Naive Bayes algorithm which is a mathematical formula where it is converted in to the required code to generate the factorial value.

$$P(A|B) = \frac{P(B|A)P(A)}{P(B)}$$

COMPLAINT:

This feature is used to prevent the suicide in future and it is accessible to all registered user, admin and any other non registered user also, so that he or she can raise a complaint about the person whose activities are abnormal or in a depressed state or about the person with suicidal thoughts. The user or the admin or any other non registered user can raise complaint by giving the person's name, mobile number, photo, their abnormal activity. Then the complaint is viewed by the admin and the complaint is shared to all the registered users and or else the complaint is taken by the admin initially and the required assistance given to the particular person at that time.

CONCLUSION:

In view of current problems and the deficiency in suicide risk evaluation, a comprehensive suicide dictionary have been established by analyzing large numbers of suicide texts. And a medical-level suicide risk level standard has been established to solve the problems such as unclear classification boundary and rough classifications for suicide text. It is a novel point to add the analysis of time in suicide text, which can help achieve point-to-surface coverage in detection of suicide risk and effectively monitor psychological changes of potential suicides dynamically. Based on the established standard, a knowledge perception-based Bert evaluation model was proposed in this study for risk level classification. The experimental results show that for the suicide risk levels proposed in this article, the classification accuracy of the knowledge-perception Bert model is 56%, which is better than the accuracy of the conventional Bert model (50%). In addition, the performance of some traditional machine learning algorithms was compared with the algorithm established in this study on the knowledge perception dataset with manual assisted labeling.

REFERENCE:

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- [1] M. H. World Health Organization and S. Use, "Suicide in the world," 2019.
- [2] T. M. Fonseka, V. Bhat, and S. H. Kennedy, "The utility of artificial intelligence in suicide risk prediction and the management of suicidal behaviors," *Australian and New Zealand Journal of Psychiatry*, vol. 53, no. 10, p. 000486741986442, 2019.
- [3] R. C. O'Connor and M. K. Nock, "The psychology of suicidal behaviour," *The Lancet Psychiatry*, vol. 1, no. 1, pp. 73–85, 2014.
- [4] Nordentoft and Merete, "Absolute risk of suicide after first hospital contact in mental disorder." *Arch Gen Psychiatry*, vol. 68, no. 10, pp. 1058–1064, 2011.
- [5] K. He, C. Jing, R. Du, Q. Wu, G. Xue, and Z. Xiang, "Deypos: Deduplicatable dynamic proof of storage for multi-user environments," *IEEE Transactions on Computers*, vol. 65, no. 12, pp. 3631–3645, 2016.
- [6] R. A. Bernert, A. M. Hilberg, R. Melia, J. P. Kim, and F. Abnoui, "Artificial intelligence and suicide prevention: A systematic review of machine learning investigations," *International Journal of Environmental Research and Public Health*, vol. 17, no. 16, p. 5929, 2020.
- [7] M. Chen and Y. Hao, "Label-less learning for emotion cognition," *IEEE Transactions on Neural Networks and Learning Systems*, vol. PP, no. 99, pp. 1–11, 2019.
- [8] M. Morales, P. Dey, T. Theisen, D. Belitz, and N. Chernova, "An investigation of deep learning systems for suicide risk assessment," in *Proceedings of the Sixth Workshop on Computational Linguistics and Clinical Psychology*, 2019.
- [9] J. Chen, K. He, Q. Yuan, G. Xue, R. Du, and L. Wang, "Batch identification game model for invalid signatures in wireless mobile networks," *IEEE Transactions on Mobile Computing*, vol. 16, no. 6, pp. 1530–1543, 2017.
- [10] M. A. Just, L. Pan, V. L. Cherkassky, D. L. McMakin, C. Cha, M. K. Nock, and D. Brent, "Machine learning of neural representations of suicide and emotion concepts identifies suicidal youth," *Nature Human Behaviour*, vol. 1, no. 12, p. 911, 2017.