

Starvation Prediction's: A Review

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ABSTRACT: This is the research paper based on people about malnutrition. Its imbalance between body requirements and the input of nutrients which can lead to nutritive complaint or starvation. The early discovery of malnutrition can help the patient to reduce unborn damage and expenditure on treatment of it. The Malnutrition Sensor will take the patient's name, height, weight, age etc. as input and show the nutrition position of the patient. The patient only have to install the operation fill his details and the app will induce the nutrition position of patient and also suggest the diet and exercise and in worst cases the help of the nutritionist will be suggested.

1. BACKGROUND, MOTIVATION AND OBJECTIVE

Malnutrition is the inequity between body needs and the intake of nutrients which can lead to nutritional disorder.

Malnutrition Detector:-

The Malnutrition Detector will take the user height, weight & age as an input and show the nutrition level of the user with their proper accuracy.

Importance of early malnutrition detection:-

The early invention of malnutrition can help the patient to reduce unborn damage and expenditure on treatment of it.

Malnutrition among women is a major, longstanding good challenge and public health concern that has adverse consequences for the survival of children and health.

Generally, malnutrition covers two broad groups of conditions, including under nutrition and fat. Women with underweight can lead to infinite difficulties, including low work productivity and increased threat of confinement, birth, low birth weight, and child death motherly rotundity can cause a variety of motherly and fatal complications during gestation, delivery. Healthy and fat are linked with different measurable conditions, including diabetes, stroke, heart complaint, cardiovascular complaint, and respiratory problems According to the World Health Organization (WHO), 462 billion grown-ups worldwide were light, while 1.9 billion were fat. Around 19 of women were light, whereas 24 were.

1. LITERATURE SURVEY

Detect Malnutrition in Underage Children by using Tensor flow Algorithm of Artificial Intelligence

Authors :-

Neha Kadam, Vaishali Dabhade, Rushikesh Baravkar, Vrushali Sarvade, prof. Chaitanya Mankar.

A Deep Learning Approach to Predict Malnutrition Status of 0-59 Month's Older Children in Bangladesh.

Authors:-

Md Mehrab Shahriar, Mirza Shaheen Iqbal, Samrat Mitra, Amit Kumar Das.

Multinomial logistic regression analysis of factors influencing malnutrition of non-pregnant married women in Bangladesh: Evidence from Bangladesh Demographic and Health Survey-2014.

7th Int. Conf. on Data Science & SDGs: Dept. of Statistics (2019), pp. 233-240 University of Rajshahi, Bangladesh.

Authors:-

M.M. Abedin, M.E. Haque, M. Sabiruzzaman, A.S. M. AlMamun, M.G. Hossain.

Prevalence of under nutrition and associated factors among pregnant women in a Public General Hospital, Tigray, Northern Ethiopia: A cross-sectional study design Journal of Nutrition and Metabolism (2020).

Authors:-

E. Ayele, G. Gebreayezgi, T. Mariye, D. Bahrey, G. Aregawi, G. Kidanemariam
Correlation analysis of demographic factors on birth weight and prediction modeling using machine learning techniques
2020 Fourth World Conference on Smart Trends in Systems, Security and Sustainability (2020)

2. PROPOSED METHODOLOGY

The project has some backend support of online technologies and database.

Firestore:-

The Firestore Real-time Database is a fully hosted NoSQL database that lets you store and sync data between your applications in Real-time. Firestore helps

you develop high-quality apps, grow your patient base, and earn further revenue. Each point works singly, and they work indeed better together. The Firestore is being used for storing the data of the patient ever and gets the access to it anywhere without any storehouse or phone lagging issue.

Google Firestore is a Google-backed operation development software that enables inventors to develop iOS, Android and Web apps. Firestore provides tools for tracking analytics, reporting and fixing app crashes, creating marketing and product trial.

Firestore offers a number of services, including **Analytics-** Google Analytics for Firestore offer free, unlimited reporting on as numerous as 500 separate events. Analytics presents data about patient in iOS and Android apps, enabling better decision-making about perfecting performance and app marketing.

Authentication- Firestore Authentication makes it easy for inventors to make secure authentication systems and enhances the sign-in and onboarding experience for druggies. This point offers a complete identity result, supporting dispatch and word accounts, phone auth, as well as Google, Facebook, GitHub, Twitter login and further.

Messaging- Firestore Cloud Messaging (FCM) is a cross-platform messaging tool that lets companies reliably admit and deliver dispatches on iOS, Android and the web at no cost.

Real time database- the Firestore Real time Database is a fully hosted NoSQL database that enables data to be stored and synced between druggies in real time. The data is synced across all guests in real time and is still available when an app goes offline.

Crashlytics- Firestore Crashlytics is a real-time crash journalist that helps inventors track, prioritize and fix stability issues that reduce the quality of their apps. With Crashlytics, inventors spend lower time organizing and troubleshooting crashes and further time structure features for their apps.

The Firestore Real time Database is a NoSQL database that lets you store and sync data between

your druggies in Real-time. Firebase helps you develop high- quality apps, grow your patient base, and earn further plutocrat. Each point works singly, and they work indeed better together. The firebase is being used for storing the data of the patient ever and gets the access to it anywhere without any storehouse or phone lagging issue.

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Android Studio:-

Android Studio is the official Integrated Development Environment (IDE) for Google's Android operating system, built on JetBrains IntelliJ IDE a software and designed specifically for Android development. It is available for download on Windows, macOS and Linux based operating systems or as a subscription-based service in 2020. It is a replacement for the Eclipse Android Development Tools (E-ADT) as the primary IDE for native Android application development.

Android Studio was announced on May 16, 2013, at the Google I/O conference. It was in early access preview stage starting from version 0.1 in May

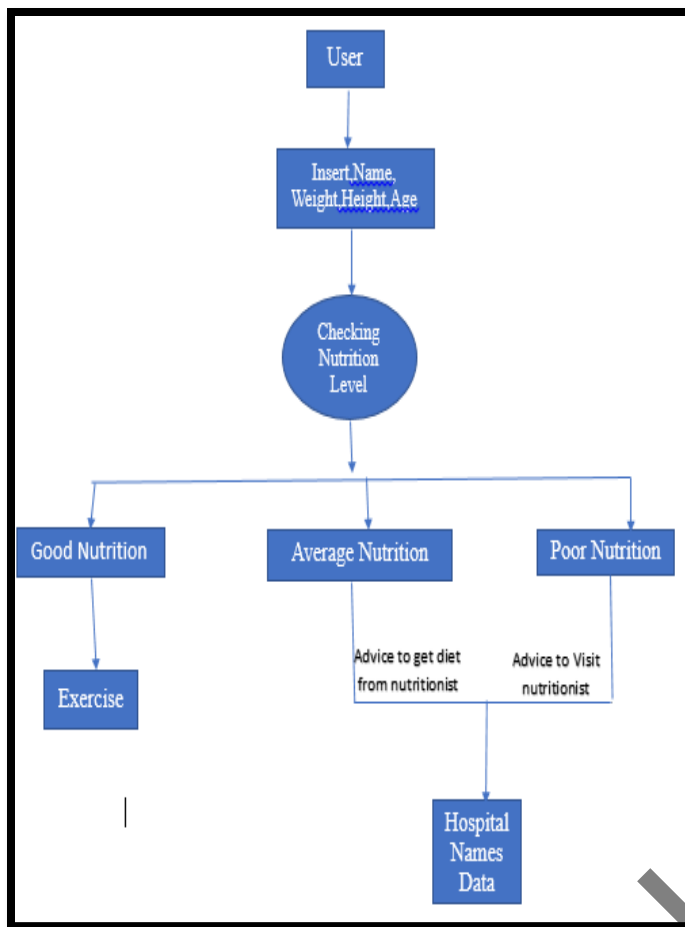
2013, then entered beta stage starting from version 0.8 which was released in June 2014. The first stable build was released in December 2014, starting from version 1.0.

On May 7, 2019, Kotlin replaced Java as Google's preferred language for Android app development. Java is still supported, as is C++.

3. BACKGROUND:-

Over 33 lacs children in India are malnourished and more than half of them fall in the severely malnourished category with Maharashtra, Bihar and Gujarat topping the list, the Ministry of Women and Child Development has said in response to an RTI query. One of the major causes for malnutrition in India is economic inequality. Due to the low social status of majority of the population, their diet often lacks in both quality and quantity. Causes of malnutrition include inappropriate dietary choices, a low income, difficulty obtaining food, and various physical and mental health conditions. Under nutrition is one type of malnutrition. It occurs when the body does not get enough food. It can lead to delayed growth, low weight, or wasting.

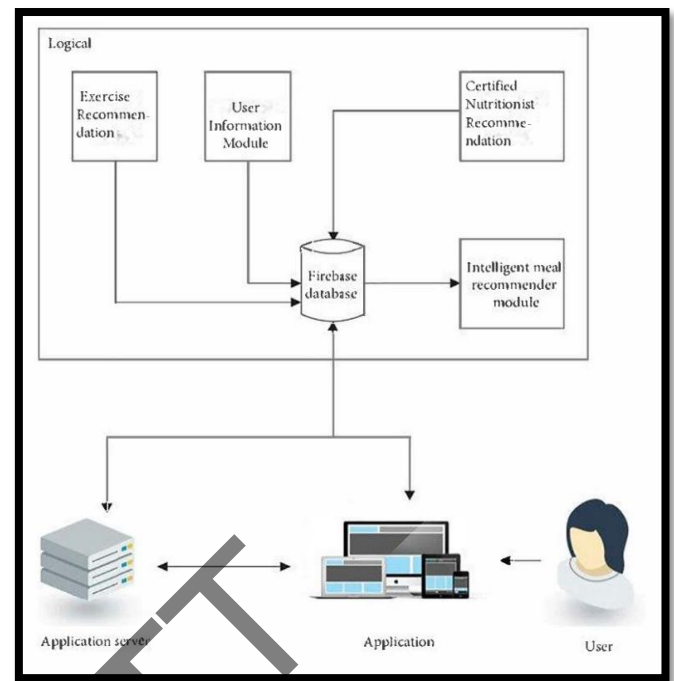
4. DATA FLOW DIAGRAM



5. RISK ANALYSIS

The biggest risk of this project is database failure if the database fails or lags or unable to stream or retrieve data the user has to wait until the database problem to be solved and we are using external database because of that the risk of providing quick solution by us increases but we will help at our end. The next problem which can occur is network problem if the user's internet is not working the user can't use the application because user's details will not be uploaded to database and for solving this issue the data has to be saved in mobile but practically that would make the application much heavy and slow to use.

6. SYSTEM ARCHITECTURE



6. DISCUSSIONS AND CONCLUSIONS

The proposed system provides the imbalance between body requirements and the input of nutrients which can lead to nutritive complaint or starvation. We used some technologies like Android Studio, Firebase. This application is for helping the malnourished people. In the future; we will try to add some features like image recognition, Retinal Scanning. It will help the needy to get proper recommendation when the doctors are not available.

The combination of MLR-RF-based system could accurately classify malnourished women with higher accuracy. The proposed system will be helpful in predicting which women are at high risk of malnutrition and reducing the burden of the health system.

7. REFERENCE

- 1) M.M. Abedin, M.E. Haque, M. Sabiruzzaman, A .S.M. Al Mamun, M.G. Hossain Multinomial logistic regression analysis of factors influencing malnutrition of non-pregnant married women in Bangladesh: Evidence from Bangladesh Demographic and Health Survey-2014

7th Int. Conf. on Data Science & SDGs: Dept. of Statistics (2019), pp. 233-240
University of Rajshahi, Bangladesh

- 2) K.Y. Ahmed, A.G. Rwabilimbo, S. Abrha, A. Page, A. Arora, F. Tadese, Global Maternal and Child Health Research collaboration (GloMACH). Factors associated with underweight, overweight, and obesity in reproductive age Tanzanian women PloS one, 15 (8) (2020), Article e0237720
- 3) E. Ayele, G. Gebreayezgi, T. Mariye, D. Bahrey, G. Aregawi, G. Kidanemariam
Prevalence of under nutrition and associated factors among pregnant women in a Public General Hospital, Tigray, Northern Ethiopia: A cross-sectional study design Journal of Nutrition and Metabolism (2020), pp. 1-7.
- 4) N.S. Borson, M.R. Kabir, Z. Zamal, R.M. Raman
Correlation analysis of demographic factors on low birth weight and prediction modeling using machine learning techniques 2020 Fourth World Conference on Smart Trends in Systems, Security and Sustainability (2020), pp. 169-173.
- 5) C. Boutari, P.D. Pappas, G. Mintziori, M.P. Nigdelis, L. Athanasiadis, D.G. Goulis, et al.
The effect of underweight on female and male reproduction Metabolism (2020), Article 154229.
- 6) E. Cieřła, E. Stochmal, S. Głuszek, E. Suliga
Breastfeeding history and the risk of overweight and obesity in middle-aged women
BMC Women's Health, 21 (1) (2021), pp. 1-9
- 7) M. Hasan, I. Sutradhar, A.S.M. Shahabuddin, M. Sarker
Double burden of malnutrition among Bangladeshi women: A literature review
Cureus, 9 (2017), p. 12.