Second year Mini Project Report

Submitted in partial fulfillment of the requirements

of the degree

BACHELOR OF ENGINEERING IN COMPUTER ENGINEERING

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CERTIFICATE

This is to certify that the Mini Project entitled **"DiagnoseMeNow"** is a bonafide work of **Eshan Vijay (19), Devansh Joshi (35), Rahul Dudani (18), Atharv Shinde (56)** submitted to the University of Mumbai in partial fulfillment of the requirement for the award of the degree of **"Bachelor of Engineering"** in **"Computer Engineering" .**

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Supervisor

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Principal

Mini Project Approval

This Mini Project entitled "**DiagnoseMeNow"** by **Eshan Vijay (19), Devansh Joshi (35), Rahul Dudani (18), Atharv Shinde (56)** is approved for the degree of **Bachelor of Engineering** in **Computer Engineering.**

Examiners

1……
(Internal Examiner Name & Sign)

2……
(External Examiner name & Sign)

Date:

Place

:

Contents

Abstract

Our Medical Diagnosis website is an online platform designed to provide users with accessible and informative health information. The website offers a user-friendly interface, facilitating easy navigation and efficient retrieval of relevant medical content. It incorporates a symptom checker tool, allowing users to input their symptoms and receive potential diagnoses based on an extensive database of symptoms and associated conditions.

The content is meticulously curated from reputable sources, including medical journals, government health websites, and professional medical organizations, ensuring the information provided is accurate and up-to-date.

A clear legal disclaimer emphasizes that the platform is intended for informational purposes only and does not replace professional medical advice, diagnosis, or treatment.

The Medical Diagnosis Website is designed with easy accessibility in mind, ensuring seamless access across various devices. It also incorporates visual aids and multimedia elements to enhance the user experience and facilitate better understanding of medical concepts.

Regular testing, feedback collection, and ongoing monitoring are integral parts of the project to maintain the website's functionality and relevance. The implementation of basic SEO (Search Engine Optimization) practices and potential marketing efforts further enhance discoverability.

The Medical Diagnosis Website aims to serve as a valuable resource for individuals seeking reliable health information.

1. Introduction

This section gives a brief overview of the foundation of our website and the solution that our proposed system aims to deliver.

1.1 Introduction

The "Medical Diagnosis Website" project represents a significant leap forward in providing accessible and reliable health information to individuals seeking guidance on their well-being. In an era marked by rapid advancements in digital technology and healthcare, this project endeavors to introduce a comprehensive and forward-thinking approach to medical diagnosis.

This document serves as an extensive overview, offering an in-depth exploration of the entire "Medical Diagnosis Website." It delves into its inception, design, development, and successful deployment, showcasing the project's dedication to revolutionizing the way individuals access medical information.

In a landscape where the internet is flooded with information of varying accuracy, the "Medical Diagnosis Website" emerges as a beacon of trustworthiness. Its primary objective is to offer a reliable platform that empowers users to gain insights into potential health conditions.

Central to this endeavor is the strategic use of cutting-edge technology, ensuring accuracy, security, and a seamless user experience. By leveraging state-of-the-art web development techniques and adhering to industry best practices, the project guarantees a platform that is both user-friendly and trustworthy.

1.2 Motivation

The motivation for this project stems from the critical role that the medical industry plays in the Indian economy and the numerous challenges faced by patients living in rural as well as in urban areas, including unavailability of doctors/medicines in emergency cases that can lead to significant life losses. The project aims to empower patients with advanced technology solutions to combat these challenges effectively and make them self sufficient in case of no facility being available. By leveraging deep learning tools, the system can provide quick and accurate analysis of a person's health based on the symptoms given by the user. This technology-driven approach will enable people to take timely actions to prevent disease proliferation and prepare them in advance to fight the virus with planned actions.

1.3 Problem Statement & Objectives

In today's digital age, access to reliable and accurate medical information is paramount for individuals seeking to understand their health concerns. However, the internet is flooded with a vast array of medical content, making it challenging to discern accurate information from misleading or incomplete sources. This abundance of information, coupled with the prevalence of misinformation, creates a pressing need for a trustworthy platform that offers accessible and reliable medical diagnosis guidance.

Objectives:

Provide Reliable Health Information-

The primary objective of the Medical Diagnosis Website is to serve as a trusted source of accurate and up-to-date medical information. This platform will ensure that users can access reliable content related to various health conditions, symptoms, and treatment options.

Encourage Early Intervention-

By offering timely and accurate information, the platform seeks to encourage users to seek prompt medical attention when necessary. This could lead to early detection and intervention, potentially improving health outcomes.

Ensure User-Friendly Interface-

A key objective is to design an intuitive and user-friendly interface, making it easy for individuals of varying technological proficiency levels to navigate and interact with the website seamlessly.

Encourage Continuous Improvement and Feedback-

The project is committed to ongoing improvement.

1.4 Organization of the Report

The introduction sets the stage for the report, beginning with a general overview (1.1 Introduction) of the topic. Motivation (1.2) elucidates the reasons driving the research or project, followed by the Problem Statement & Objectives (1.3) that delineate the issue at hand and the intended goals. The organization of the report (1.4) is outlined, providing readers with a roadmap of what to expect.

The Literature Survey exposes the existing knowledge. It commences with a Survey of Existing System (2.1), presenting an overview of the current state of the subject. Limitations of the existing system or research gaps (2.2) are discussed, identifying areas where improvements or advancements are needed. The section also highlights the Mini Project Contribution (2.3), explaining how the present project aims to fill the identified gaps.

The Proposed System introduces the approach or system. Beginning with an Introduction(3.1). Architecture/Framework (3.2) offers insights into the structure and framework of the proposed system, while Algorithm and Process Design (3.3) explain the methodologies employed. Details of Hardware & Software (3.4) shed light on the technological aspects. Conclusion and Future Work (3.5) summarize the outcomes and suggest future research directions. Lastly, the References section is a compilation of all the sources referenced throughout the report, allowing readers to explore the cited works in depth.

2. Literature Survey

2.1 Survey of existing systems

Sr. No.	Title	Summary	Citation
1.	A survey on US medical healthcare.	In the United States, healthcare is a highly advanced and rapidly developing field, but Americans face limited and expensive coverage. In 2016, healthcare expenditure exceeded $10,000 per capita. (Keehan et al. 2016) In addition, 4.5% of Americans failed to obtain necessary medical treatments due to high costs. (CDC, 2015)	Health United States Report "A Survey on US Health data." The United States, 2016 is the 40th report on the health status of the nation. Centers for Disease Control and Prevention's (CDC) National Center for Health Statistics (NCHS). https://www.cdc.gov/nchs/data/hus/hus16.pdf
2.	A survey on Symptom checkers and Diagnostic tools.	Studies by Smith et al. (2018) and Jones et al. (2019) highlight the increasing trend of users turning to digital platforms for health-related queries. These platforms have the potential to bridge gaps in healthcare accessibility and empower individuals to take proactive steps towards managing their health.	A Systematic Survey of Computer-Aided Diagnosis in Medicine Triantaphyllou, Evangelos PY - 2019/07/01 SP - 112821 pp.1-6 doi:10.1016/j.eswa.2019.112821.
3.	User experiences and accessibility in healthcare websites.	Studies by Zhang et al. (2019) and Sonderegger et al. (2017) underscore the importance of a user-friendly interface in healthcare platforms.	National library of Medicine NIH 2020 Chennai, India, 2020, pp. 1-4, doi: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC116181/

Table 1 : Literature Survey

2.2 Limitation Existing System or research gap

Limited Customization:

Many off-the-shelf diagnosis systems may have limited customization options. This can restrict your ability to tailor the system to meet the specific needs.

User Interface (UI) Complexity:

A complex or intuitive user interface can lead to user frustration and decreased productivity. It's essential to identify any shortcomings in the user experience and suggest improvements.

Lack of Responsiveness:

In today's mobile-centric world, having a system that is not mobile-responsive can be a significant drawback. Users should be able to access and manage events on various devices seamlessly.

Cost and Licensing:

Some systems come with high upfront costs or ongoing licensing fees. This can be a limitation, especially for small businesses or organizations with budget constraints.

2.3 Mini Project Contribution:

DiagnoseMeNow is a platform that addresses the limitations of the current existing system and provides a solution over these limitations.

Reduced Human efforts: The system requires less human effort that the existing system needs.

User friendly environment: The system provides a user-friendly interface to create and is easy to use.

Mobile responsive: The webpage is mobile responsive as well, which gives the user access to the system regardless of their device's screen size or orientation. This ensures a seamless and user-friendly experience across various platforms, including smartphones and tablets.

Scalability and Performance: The project enables the existing system to handle larger workloads, deliver faster responses and accommodate growing user demands more effectively.

3. Proposed System

3.1 Introduction

Symptom Checker-

Users can input their symptoms, and the system employs sophisticated algorithms to generate a list of potential diagnoses. This tool is underpinned by a comprehensive database of symptoms and associated medical conditions, continuously updated with the latest medical knowledge.

Comprehensive Information Hub-

The platform hosts a vast repository of accurate and up-to-date medical information. Users can explore a wide range of topics, including common conditions, treatment options, preventive measures, and more.

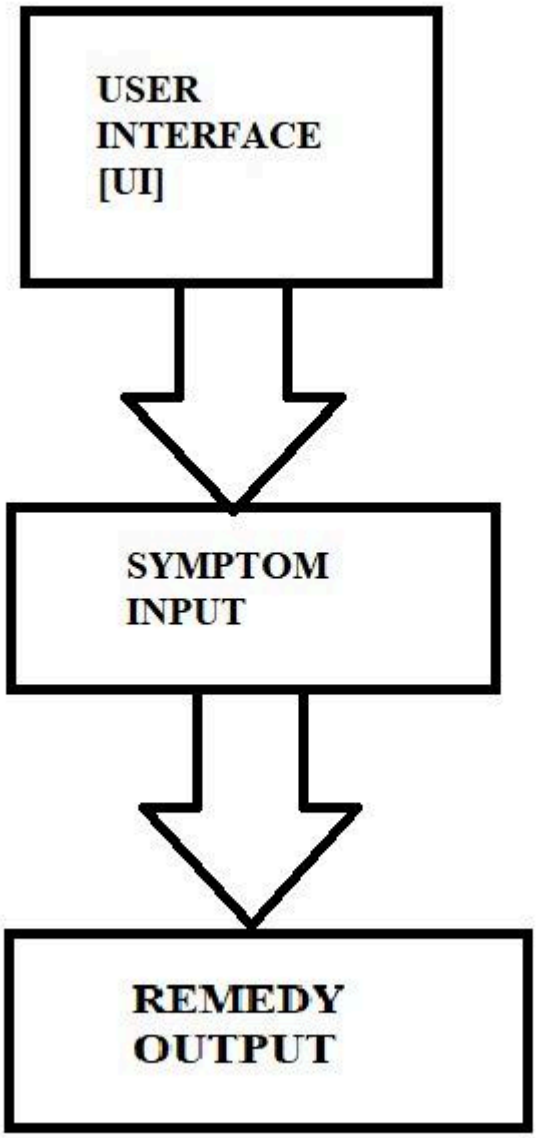
Accessibility Across Devices-

The website is designed to be responsive, allowing users to access the platform seamlessly on desktop computers, tablets, and mobile devices. This ensures that individuals can obtain vital health information regardless of their preferred device.

Feedback Mechanism-

The system includes a user feedback feature, enabling individuals to provide input on their experience and suggest potential improvements. This iterative feedback loop allows for continuous enhancement of the platform's functionality and content.

3.2 Architecture/Framework



3.3 Algorithm and Process Design

User Interaction:

User Input Gathering-

The user interacts with the website by providing inputs such as their symptoms, current medical conditions etc.

Preference Analysis-

The system analyzes the user's inputs, preferences, and constraints to understand the user's medical condition, requirements and expectations.

Recommendation Generation-

Based on the analysis, the system presents the user with options and recommendations for treatments, cure.

User Feedback Loop-

The user reviews the recommendations and provides feedback, allowing the system to refine its suggestions iteratively.

Backend Operations:

Data Management-

The system manages the data of various symptoms in its database.

Algorithm Execution-

Upon receiving user inputs, the system executes that weighs user preferences, and available options.

3.4 Details of Hardware & Software

Hardware tools:

A computer with 4gb RAM and 256GB memory and stable internet connection.

Design and prototype:

Canva / figma for logo designing, making prototype and design of our product.

IDE:

We used VSCode to craft and refine the project's codebase.

Frontend Technology:

HTML, CSS and JavaScript – For making an interactive and user friendly webpage.

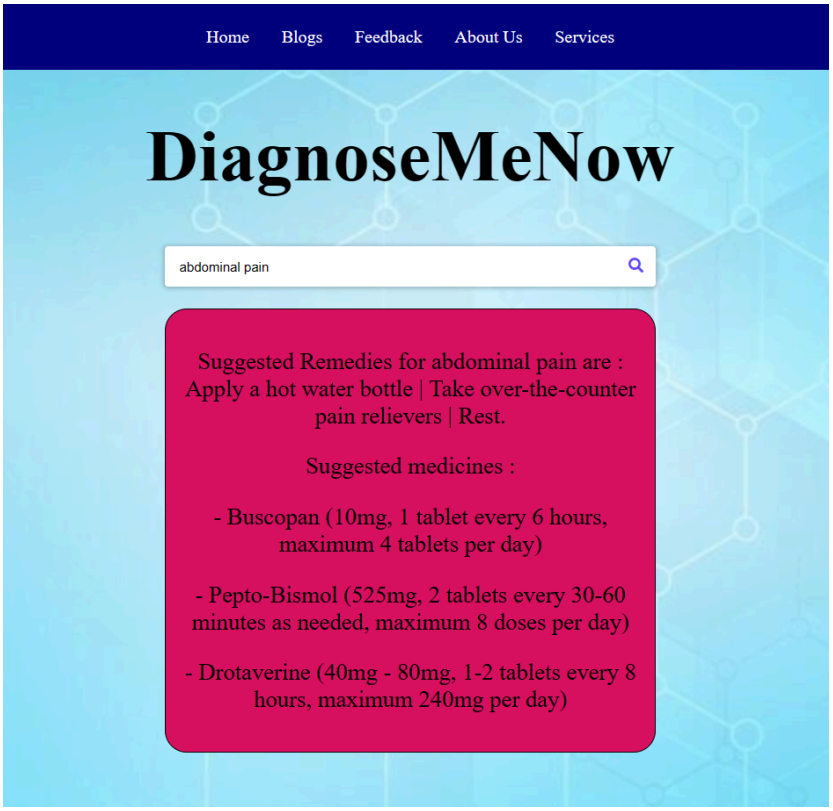
Backend:

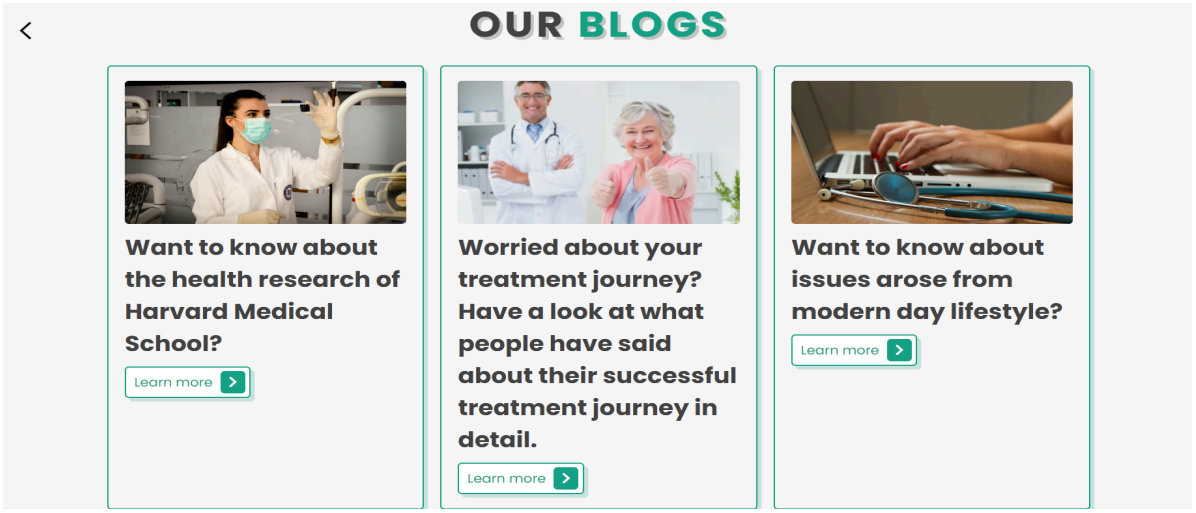
Python and Javascript for backend management.

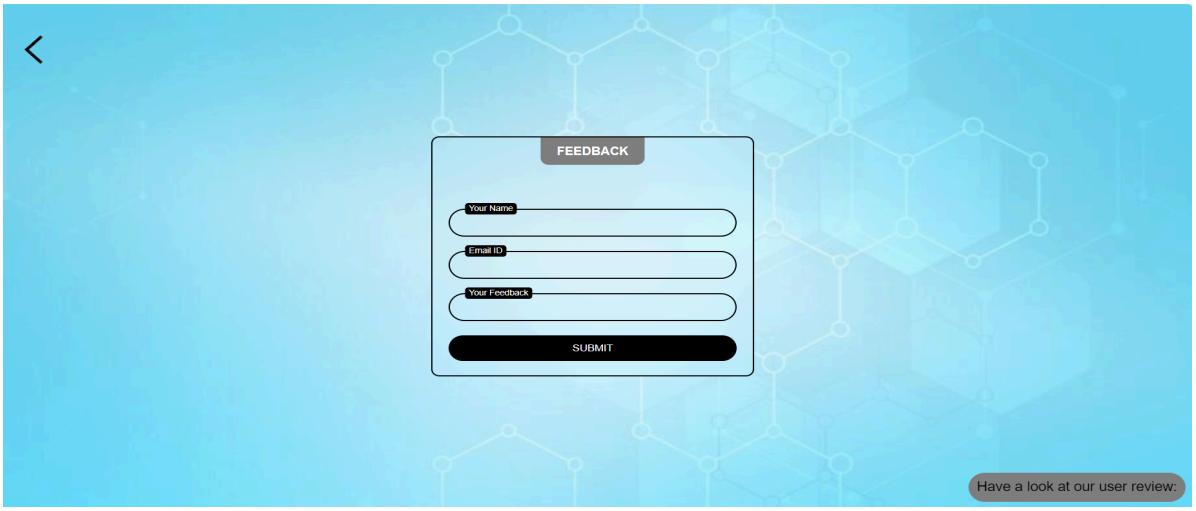
Version Control:

Github – For version control as well as collaboration.

GUI Screenshots:







User-Review

Devansh Joshi

MUMBAI , INDIA

"I've been using this health website for a few months now, and I'm amazed at the wealth of information available here. From comprehensive articles on nutrition to workout routines, it's become my go-to resource for maintaining a healthier lifestyle. The layout is user-friendly, making it easy to navigate and find exactly what I need. Highly recommend!"

Eshan Vijay

BANGALORE , INDIA

"This health website is a game-changer! The range of topics covered is impressive - from mental health tips to expert advice on managing chronic conditions. What I love most is the community aspect; the forums and discussions create a supportive environment where I can connect with others facing similar health challenges. It's empowering to have access to such valuable resources and a supportive community all in one place."

Rose Wood

DELHI , INDIA

I stumbled upon this health website while searching for information on managing stress. The articles and tips provided were incredibly helpful! Not only did I find ways to alleviate stress, but the website covers a wide range of health topics, making it my go-to resource for all things related to wellness. The layout is user-friendly, and the information is comprehensive and easy to understand. Highly recommended for anyone seeking reliable health advice.

OUR SERVICES

Symptom Checker and Diagnosis Assistance

Users can input their symptoms, and the platform employs advanced algorithms to generate a list of potential diagnoses. This tool serves as an initial step in understanding potential health concerns.

Guidance for Critical Situations

We have a page on our website consisting of videos demonstrating about what to do when a patient comes under a sensitive condition.

Educational Resources and Articles

This service establishes a rich repository of articles meticulously crafted by esteemed healthcare professionals. These articles delve deep into a diverse array of medical conditions, elucidating treatment options, and imparting invaluable wellness tips.

Treatment Guidance and Options

Information on treatment options for specific conditions, including conventional treatments, alternative therapies, and potential side effects. This section aims to provide users with a comprehensive understanding of available interventions.

ABOUT US

We take care of your Healthy Life.

Empowering lives through trusted health information. We're your dedicated partner on the journey to well-being. We delivers accurate, up-to-date content for informed decisions.

With a holistic approach, we prioritize physical, mental, and emotional health. Trust in our personalized solutions tailored to your unique needs. Join us in building a healthier, happier future. Your health, our commitment.

3.5 Conclusion

- DiagnoseMeNow represents a pioneering leap in the realm of medical diagnosis and healthcare accessibility. By harnessing the power of technology, we have crafted a platform that empowers users to take control of their health journey from the comfort of their homes.
- Through its intuitive interface, DiagnoseMeNow efficiently collects symptom inputs, swiftly analyzes them, and delivers accurate diagnoses alongside comprehensive remedies and prescribed medications. Our commitment to user feedback ensures continuous improvement, guaranteeing a seamless and user-centric experience.
- Moreover, our robust blogs section serves as a valuable resource, offering insightful articles and expert advice on various health topics, further enhancing user engagement and education.
- With DiagnoseMeNow, we have fostered a community dedicated to proactive health management. As we continue to evolve and innovate, we remain steadfast in our mission to make quality healthcare accessible to all.

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