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ADICHUNCHANAGIRI UNIVERSITY

Faculty of Engineering, Management &Technology

BG Nagara – 571448, Nagamangala Taluk, Mandya District, Karnataka (INDIA)

An Internship Report
On

"Health Monitoring"

Submitted in partial fulfilment of the requirement for
the VIII semester course of

Bachelor of Engineering

in

Information Science and Engineering

Submitted by: **PUNEETH GOWDA Y S**
21ISE041

Internship carried out at
Technofly Solutions

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DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING
BGS INSTITUTE OF TECHNOLOGY
(Approved by AICTE, New Delhi & Recognised by Govt. of Karnataka)
B.G. NAGARA-571448
2024-2025

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ADICHUNCHANAGIRI UNIVERSITY

BGS INSTITUTE OF TECHNOLOGY

(Approved by AICTE, New Delhi & Recognised by Govt. of Karnataka)

Department of Information Science & Engineering

CERTIFICATE

This is to certify that the internship report entitled **"HEALTH MONITORING"** is bonafide work carried out by **PUNEETH GOWDA Y S (21ISE041)** a bonafide student of **BGS Institute Technology, Adichunchanagiri University, B.G Nagara** in partial fulfillment of the award of Bachelor of Engineering in **Information Science & Engineering** during the year 2024-25. The internship report has been approved as it satisfies the academic requirements in respect of internship work prescribed forthe Bachelor of Engineering.

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ACKNOWLEDGEMENT

I would like to take this opportunity to thank a lot of eminent personalities, without whose constant encouragement, this endeavor of mine would not have become a reality.

At first, I would like to thank the **ACU, B G Nagara**, for having this Internship as part of its curriculum, which gave me a wonderful opportunity to work on my research and presentation abilities and **BGSIT** for providing me with such excellent facilities, without which, this internship could not have acquired the shape it has now done.

My heartfelt gratitude to our honorable principal **Dr. Shobha B N, BGS Institute of Technology,** for her constant support and encouragement.

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I would like to thank, **Mr. Yogaprakash M G, Asst. Prof. Internship Coordinator, Dept. of ISE** for her continuous support.

I would like to thank, **Mr. Sridhara N, Asst. Prof., Dept. of ISE** for her continuous support,advice and guidance.

I would like to thank, **Mrs. Meghana, Technofly Solutions** for providing internship to me and his continuous support, advice and guidance.

I am grateful to my parents, friends and well-wishers for their contribution on a personal level.

Last but not the least my profound thanks to the Teaching staff and non-Teaching staff of the Department of Information Science and Engineering for their help and patience.

PUNEETH GOWDA Y S
21ISE041

DECLARATION

I **PUNEETH GOWDA Y S** bearing USN **21ISE041**, student of final year B.E, Department of Information Science and Engineering, BGS Institute of Technology, Adichunchanagiri University, B G Nagara, hereby declare that the internship report entitled **"HEALTH MONITORING"** has been independently carried out by me under the supervision of my External Guide **Mrs. Meghana, Technofly Solutions** and my Internal Guide **Mr. Sridhara N,** Asst. Professor, Dept. of ISE, BGS Institute of Technology, B G Nagara, and I have followed the guidelines provided by the Institute in preparing the Internship report and wherever I have used materials (data, theoretical analysis, figures, and text) from other sources, I have given due credit to them by citing them in the text of the **Internship** report and giving their details in the references and submitted in partial fulfillment of the requirements for the award of **Bachelor of Engineering** in **Information Science and Engineering**, Adichunchanagiri University, B G Nagara during the academic year **2024-25**.

I further declare that this internship report has not been submitted by me to any university or institution either in part or in full for the award of any degree.

PUNEETH GOWDA Y S
21ISE041

INTERNSHIP CERTIFICATE

TechnoFly Solutions

Technofly

Internship Certificate

This is to certify that Puneeth. Gowda. Y. S a student of B. E. S Institute of Technology has completed 1 months/weeks of Internship From 17/02/2025 To 17/03/2025 in Data Science Domain.

We wish you all the best in your future endeavors.

Date : 17/03/2025

For TechnoFly Solutions

TECHNOFLY SOLUTIONS Date: Authorized Signature BANGALORE-40

Technofly Solutions, Vijayanagar, Bangalore - 40.
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ABSTRACT

In present days, post-operative patients or elderly patients or any other other patients need to be monitored constantly. When patients are monitored in their homes, they might lack in getting correct medications because their caregiver might make a delay in understanding the situation that might be wrong in the patient's health condition which might result in some problems. Inorder to check the patient's health conditions, we need to consider various parameters like temperature, pulse rate, blood pressure, Oxygen level in blood, etc. To get these data, we need to use multiple devices for each of the health parameters. If the working people need to have their health-checkup,it will be a time-consuming process.Due to this, they tend to postpone their regular health checkups. So, to overcome these problems, an IOT based patient remote monitoring system has been developed using which the patient's health can be remotely observed.

EXECUTIVE SUMMARY

My One month internship program work term was with the Technofly Solutions Data Science, Company in Bangalore. I was involved in the area of Data Science during my work term, all of which will be outlined in this report. This report will cover some background information on the tasks or projects I was involved in, as well as details on how the projects were developed.

The task is to develop a website by using HTML, CSS, DBMS, Pyton, and MySQL. The team has assigned certain task to me and also they have well guided me in an appropriate way so that I could develop a website by my own. The team has given me a chance to develop a website and I have developed it successfully.

I acquired many new technical skills throughout my work term. I acquired new knowledge in the area of python, Mechine learning. Most importantly, the work experience was very good which included good fellowship, cooperative teamwork and accepting responsibilities.

This report concludes with my overall impressions of my work experience as well as my opinion of the internship Program in general.

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CHAPTER 1

COMPANY PROFILE

This chapter gives the brief introduction about the company, its vision, mission, values and inspirer of the company. It also covers the services offered by the company details, product details, and number of people working in company and different department and its function.

1.1 Profile

Company Name : TechnoFly Solutions

Reregister Address:TechnoFly Solutions

TechnoFly Solutions Pvt Ltd,

#778,2nd Floor,

Vijayanagar ,Bangalore

Karnataka 560040

Official Website: www.technofly.in

Telephone no: 9663476586

TechnoFly Solutions is a best-in-class learning solutions organization headquartered in India's IT capital, Bangalore. We offer a wide range of courses in the area of software testing and software development.

It was founded on 2017. At TechnoFly Solutions , They ensure training is imparted by specialists with proven subject matter expertise and who have spent over a decade in their area of specialization. TechnoFly Solutions faculty are highly competent, skilled and dedicated to giving their best towards the professional development of our students. Besides training, we also provide placement assistance to Their students and most of the big corporate in the corporate world hire their trained talent.

Technofly Solutions & Consulting was found in year 2017 by a team with 14+ years of experience in embedded systems domain. Technofly Solutions focuses globally on automotive embedded technologies and VLSI Design, Corporate Training & Consulting. Till now we have delivered more than 15+ Corporate Trainings for companies working in Embedded Automotive Technologies in India. Also involved in the Development of OBD2 (On Board Diagnose Product for Passenger cars) for clients in India.

TechnoFly was formed by professionals with formal qualifications and industrial experience in the fields of embedded systems, real-time software, process control and industrial electronics. The company is professionally managed and supported by qualified experienced specialists and consultants with experience in embedded systems – including hardware and software.

Initially, the company Developed system software tools; these include C Compilers for micro-controllers and other supporting tools such as assembler, linker, simulator and Integrated Development Environment. Later Single Board Computers (SBCs) – were developed and are still manufactured. Such hardware boards support a broad range of processors – including 8 bit, 16 and 32 bit processor.

Since 2015, company also started offering design and development services. This includes a complete spectrum of activities in product development life cycle that is idea generation, requirement gathering to prototype making, testing and manufacturing. Company has so far provided product design services for various sectors which include the Industrial automation, Instrumentation, Automotive, Consumer and Defense sector.

The team is associated with R&D in Wireless Communication Technologies department in the company. The team is currently working on 4G-5G technologies associated with Cognitive Devices such as WLAN, Bluetooth, Zigbee, other Mobile networks etc,for better achievable network efficiencies. The work involves examining various methodologies

currently available and under development and implementation of the same for further analysis and in depth understanding of the effects of these methods on network capacities.

The department is currently developing and examining optimal solutions for Network Data Rate maximization in both co-operative and non-cooperative network users scenarios involving cognitive(SU’s) and non-cognitive(PU’s) devices. The work is mainly concentrated

1.2 Visions and Goals

- Gain Practical Experience: Use the internship as an opportunity to apply theoretical knowledge to real-world scenarios and projects.
- Learn Industry Best Practices: Understand how professionals in your field operate, including their workflows, tools, and methodologies.
- Build Professional Relationships: Network with industry professionals, mentors, and fellow interns to expand your professional circle.
- Explore Career Paths: Use the internship to explore different roles and industries within your field of study or interest.
- Contribute Meaningfully: Aim to make valuable contributions to projects and tasks assigned during the internship.
- Skill Development: Identify specific skills you want to develop or improve during the internship, such as programming languages, project management, communication, or problem-solving.
- Project Experience: Work on meaningful projects that allow you to apply your skills and learn new ones.
- Networking: Connect with professionals in your field, seek mentorship, and build relationships that may benefit your future career.
- Feedback and Learning: Seek feedback regularly to understand areas of improvement and actively seek learning opportunities.
- Career Exploration: Use the internship to gain insights into different career paths, industries, or job roles within your field.
- Professionalism: Develop professionalism in areas like time management, communication, teamwork, and meeting deadlines.
- Portfolio Building: If applicable, aim to create a portfolio of your work during the internship that showcases your skills and accomplishments.

CHAPTER 2

ABOUT THE COMPANY

2.1 Company Information

Technofly Solutionsis a leading electronics product design, development and services company. Theprofessionals with industrial experience in embedded technology, real time software, process control and industrial electronics held the company.The company is the pioneers in design and development of Single Board Computers, Compilers for micro-controllers within India. Talented professional in the field of embedded hardware, software design and development toil to reach its excellence. Technofly Solutions & Consulting was found in year 2017 by a team with 14+ years of experience in embedded systems domain. Technofly Solutions focuses globally on automotive embedded technologies and VLSI Design, Corporate Training & Consulting. Till now we have delivered more than 15+ Corporate Trainings for companies working in Embedded Automotive Technologies in India. Also involved in the Development of OBD2 (On Board Diagnose Product for Passenger cars) for clients in India. The Management team as mixture of Technical and Business development expertise with 14+years of experience in the Information Technology Field Present the company is involved with developing the GPS Training system for two wheels with our associated partners also more focusing on Corporate Trainings on AUTOMOTIVE EMBEDDED and Focused on providing ASIC solutions that involves Design and Verification IP's And Functional Verification of Designs.TechnoFly was formed by professionals with formal qualifications and industrial experience in the fields of embedded systems, real-time software, process control and industrial electronics. The company is professionally managed and supported by qualified experienced specialists and consultants with experience in embedded systems – including hardware and software.Initially, the company Developed system software tools; these include C Compilers for micro-controllers and other supporting tools such as assembler, linker, simulator and Integrated Development Environment. Later Single Board Computers (SBCs) – were developed and are still manufactured. Such hardware boards support a broad range of processors – including 8 bit, 16 and 32 bit processor.

2.2 DEPARTMENTS

The team is associated with R&D in Wireless Communication Technologies department in the company. The team is currently working on 4G-5G technologies associated with Cognitive Devices such as WLAN, Bluetooth, Zigbee, other Mobile networks etc,for better achievable network efficiencies. The work involves examining various methodologies currently available and under development and implementation of the same for further analysis and in depth understanding of the effects of these methods on network capacities. The department is currently developing and examining optimal solutions for Network Data Rate maximization in both co-operative and non-cooperative network users scenarios involving cognitive(SU's) and non-cognitive(PU's) devices. The work is mainly concentrated The department is actively involved in acquiring latest technologies related projects in Low power VLSI, wireless domain and these projects are well thought out and detailed implementations are carried out. Projects are mainly done on Verilog, MATLAB platform (from math works) and may also depend on NS2, NetSim and Xilinx platforms as per the requirements of the project in progress. Current internship involves study implementation and analysis of High speed and Energy Efficient Carry Skip adder (CSKA) with Hybrid model for achieving high speed and reducing the power consumption.

2.2.1 Courses Details

- Full Stack Web Development
- Python with Machine Learning
- Artificial Intelligence
- Cyber Security
- Cloud Computing
- Digital Marketing
- AWS
- Advanced Java
- Android App Development Course.

2.2.2 About the Trainer

Every trainer comes with an industry experience of more than 12 + Years in Software Development and Testing.

- All our trainers are certified (certification like ISTQB, CSTE, OCJP, PMP, Certified Test Manager, OCA, OCP, 6 sigma Black Belt)
- We have trainers worked in top Software companies like Oracle, EMC2, Infosys, Wipro etc…
- Every trainer has got hands on experience of more than 5 years into training.
- Each trainer has trained more than 32 to 80 thousand students on Software Development and Testing.
- Our trainers are visiting faculties on Software Development and Testing for various universities across the world.
- They have extensive work experience in building POCs for various projects on varied domain and technologies.
- They have designed and implemented Software Development and Test Life cycle/processes for various projects.
- They have extensive work experience in Design and Development of various architectures in Development and Testing .
- Each trainer has been a consultant for more than 50 to 60 projects in an average for various clients across the world.

CHAPTER 3

TASK PERFORMED

During the internship, I performed a variety of tasks that deepened my understanding of machine learning and its practical applications. I began by exploring fundamental ML concepts and familiarizing myself with data preprocessing techniques such as data cleaning and normalization. I worked extensively with Python libraries including Pandas, NumPy, Matplotlib, and Seaborn to analyze and visualize health-related datasets. I implemented various machine learning algorithms like logistic regression, decision trees, and random forest to build predictive models. A major task involved building a health monitoring system that could predict potential health risks based on input data. I divided the datasets into training and testing sets and evaluated model performance using metrics such as accuracy, precision, recall, and the confusion matrix. To enhance model efficiency, I conducted hyperparameter tuning and took steps to minimize overfitting.

3.1 Existing System

- Health monitoring is mostly done through traditional, manual checkups.
- No real-time tracking or continuous monitoring of health parameters.
- Health conditions are often detected only after symptoms become severe.
- Lack of early prediction or preventive alerts for possible health risks.
- Minimal use of machine learning or data analytics in the diagnosis process.
- Inefficient in managing large-scale health data for predictive modeling.
- Limited accessibility for patients in remote or rural areas.

3.2 Proposed System

- Introduces a machine learning-based model for predicting health issues early.
- Uses real-time data to monitor patient health and detect anomalies.
- Provides quick, automated diagnostic results to support clinical decisions.
- Enhances accessibility to health monitoring, especially in remote areas.
- Offers a scalable and efficient system that reduces dependency on manual checkups.
- Supports early detection, preventive care, and improved healthcare outcomes.

3.3 System Requirements

Functional Requirement defines a function of a software system and how the system must behave when presented with specific inputs or conditions.

3.3.1 Hardware Requirements

- Hardware - Pentium
- Speed - 1.1 GHz
- RAM - 4 GB
- Hard Disk - 120 GB
- Key Board - Standard Windows Keyboard
- Mouse - Two or Three Button Mouse

3.3.2 Software Requirements

- Operating System - Windows 10
- Technology - Python
- Web Technologies - Html, JavaScript, CSS
- IDE - Jupyter Notebook / PyCharm / VS Code
- Web Server - Flask / Django
- Database - My SQL

3.4 The Python Programming Language

Python is a programming language that lets you work quickly and integrate systems more efficiently.Python was designed for readability, and has some similarities to the English language with influence from mathematics. Python uses new lines to complete a command as opposed to other programming language which often use semicolons or parentheses.

1. Readable: Python is a very readable language.

2. Easy to Learn: Learning python is easy as this is a expressive and high level programming language, which means it is easy to understand the language and thus easy to learn.

3. Cross platform: Python is available and can run on various operating systems such as Mac, Windows, Linux, Unix etc. This makes it a cross platform and portable language.

4. Open Source: Python is a open source programming language.

5. Large standard library: Python comes with a large standard library that has some handy codes and functions which we can use while writing code in Python.

6. Supports exception handling: If you are new, you may wonder what is an exception?exception is an event that can occur during program exception and can disrupt the normal flow of program.

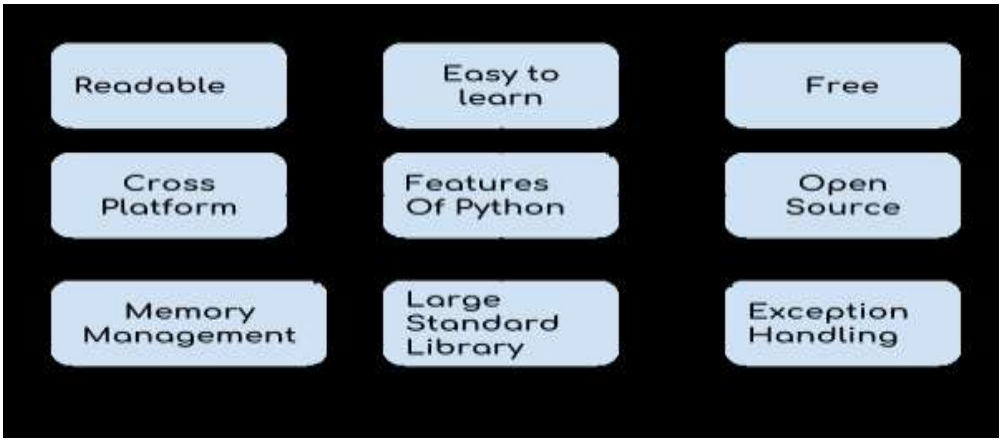

Fig:3.1 Python Programming Language

3.5 System Architecture

A system architecture or systems architecture is the conceptual model that defines the structure, behavior, and more views of a system. An architecture description is a formal description and representation of a system, organized in a way that supports reasoning about the structures and behaviors of the system. A system architecture can consist of system components and the sub- systems developed, that will work together to implement the overall system. There have been efforts to formalize languages to describe system architecture, collectively these are called architecture description languages (ADLs).Various organizations can define systems architecture in different ways, including The fundamental organization of a system, embodied in its components, their relationships to each other and to the environment, and the principles governing its design and evolution. A representation of a system, including a mapping of functionality onto hardware and software components, a mapping of the software architecture onto the hardware architecture, and human interaction with these components. An allocated arrangement of physical elements which provides the design solution for a consumer product or life-cycle process intended to satisfy the requirements of the functional architecture and the requirements baseline.Architecture consists of the most important, pervasive, top-level, strategic inventions, decisions, and their associated rationales about the overall structure (i.e., essential elements and their relationships) and associated characteristics and behavior. A description of the design and contents of a computer system. If documented, it may include information such as a detailed

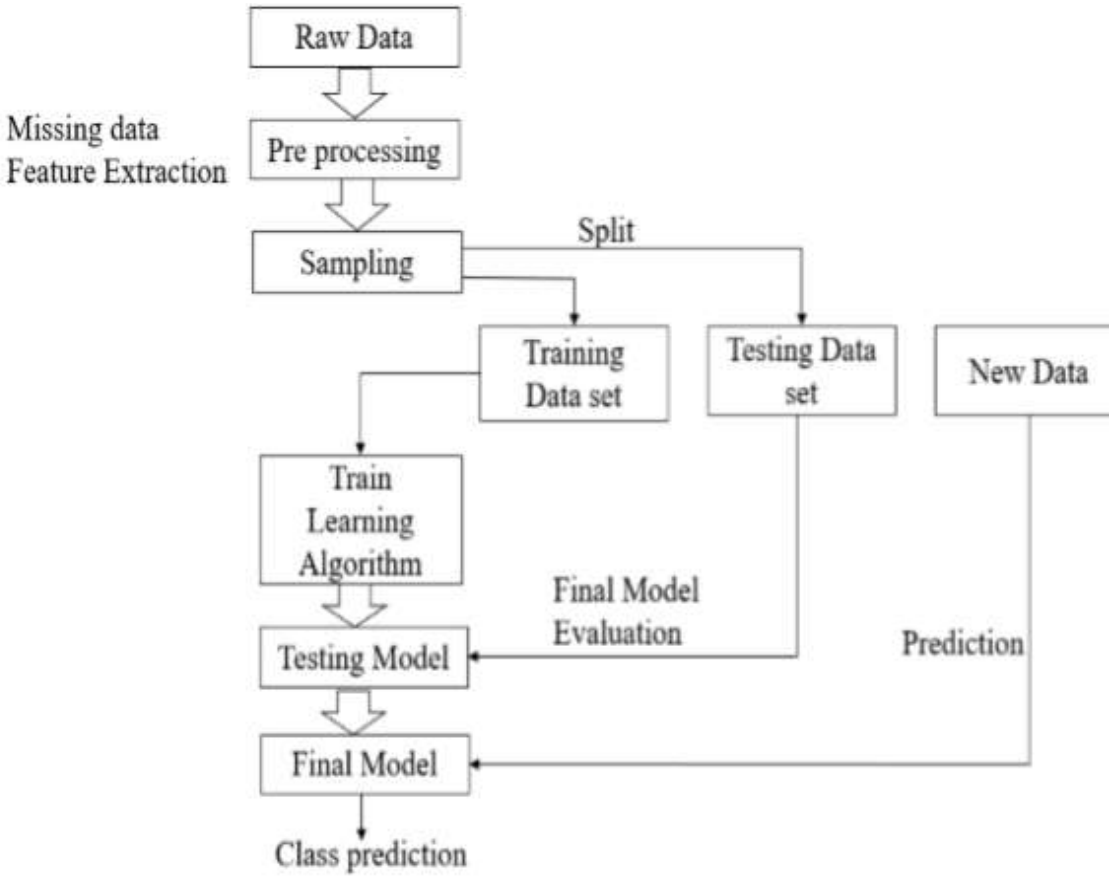

Fig:3.2 System architecture

inventory of current hardware, software and networking capabilities; a description of long-range plans and priorities for future purchases, and a plan for upgrading and/or replacing dated equipment and software. A formal description of a system, or a detailed plan of the system at component level to guide its implementation.The composite of the design architectures for products and their life-cycle processes. The structure of components, their interrelationships, and the principles and guidelines governing their design and evolution over time.One can think of system architecture as a set of representations of an existing (or future) system. These representations initially describe a general, high-level functional organization, and are progressively refined to more detailed and concrete descriptions.

3.5.1 Use case Diagram

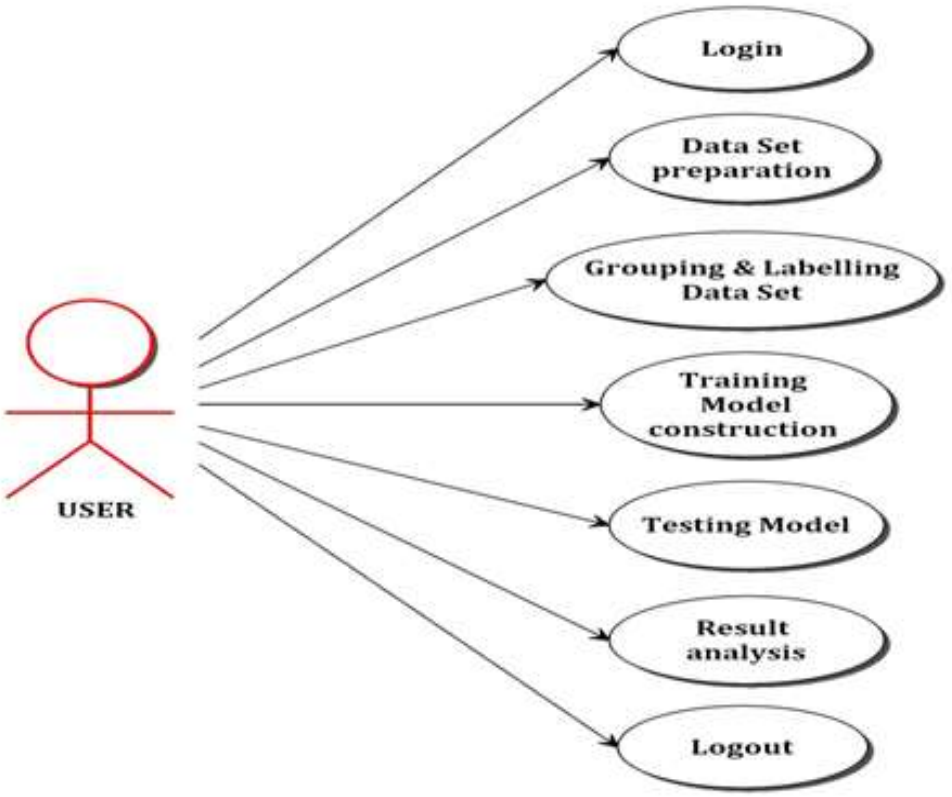

Fig:3.3 Use case Diagram

A use case diagram at its simplest is a representation of a user's interaction with the system that shows the relationship between the user and the different use cases in which the user is involved. A use case diagram can identify the different types of users of a system and the different use cases and will often be accompanied by other types of diagrams as well. While a use case itself might drill into a lot of detail about every possibility, a use case diagram can help provide a higher-level view of the system. It has been said before that "Use case diagrams are the blueprints for your system". They provide the simplified and graphical representation of what the system must actually do.

3.6 Snapshots

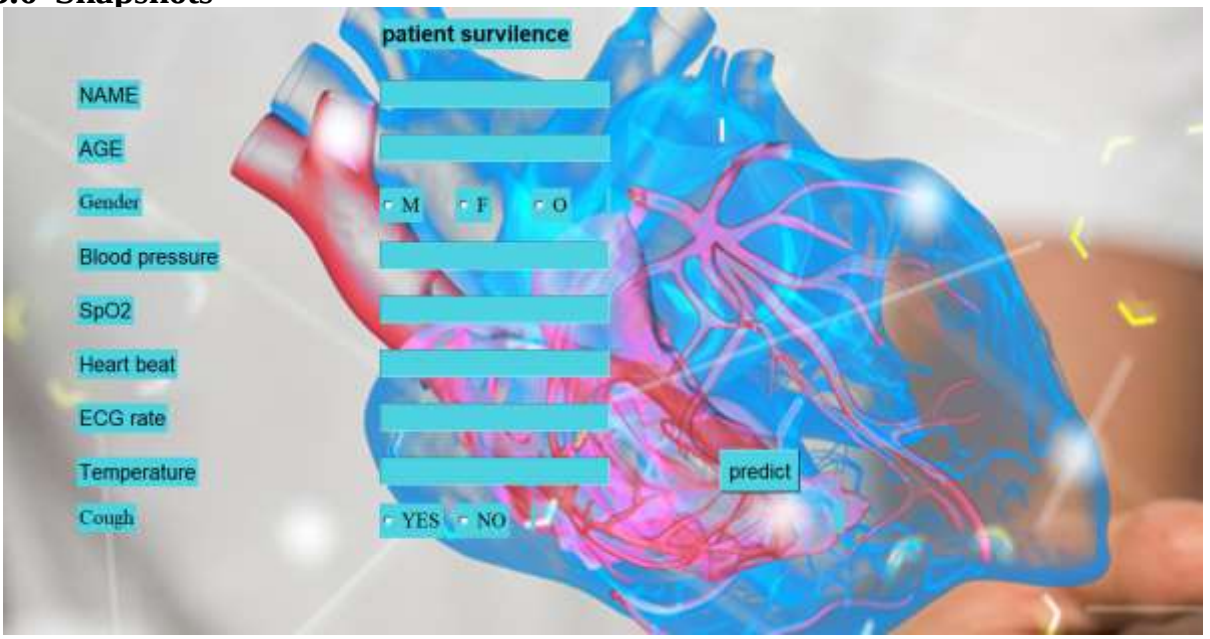

Fig:3.4 User interface

healthcare application for predicting patient health based on various medical parameters like age, gender, blood pressure, heart rate, ECG rate, Users input these values

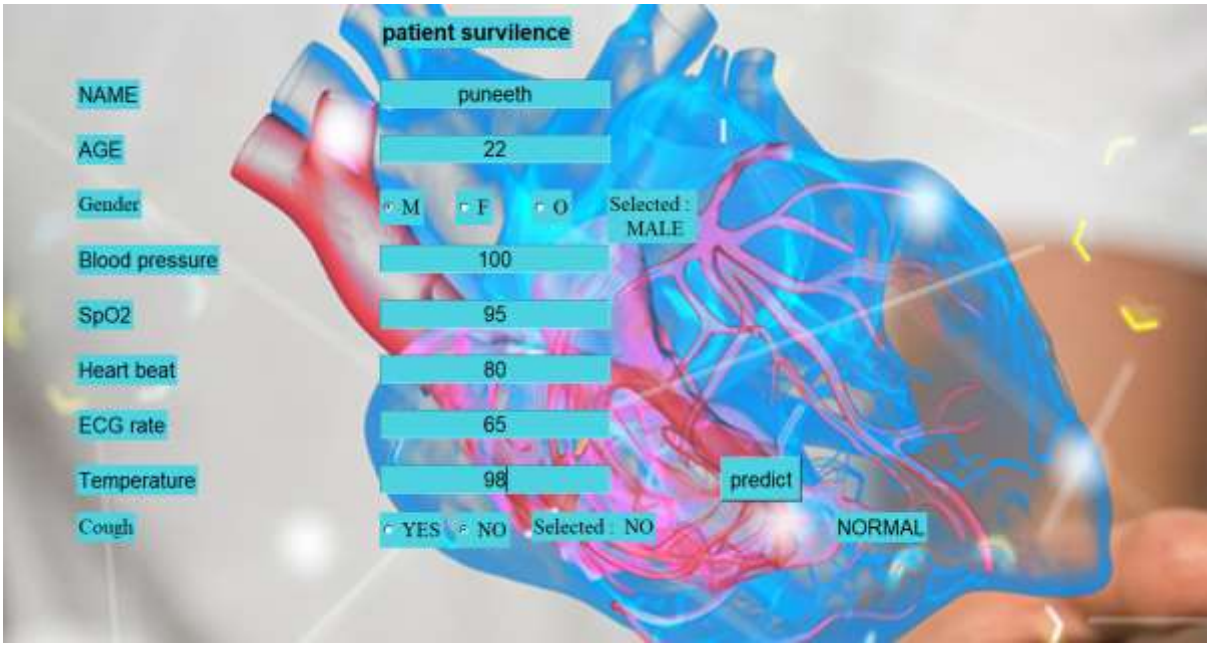

Fig:3.5 Prediction interface normal

This prediction interface collects a patient's vital signs and symptoms to assess their health status. After inputting the details and clicking "predict," it provides a result—like "NORMAL"—indicating the patient's current health condition.

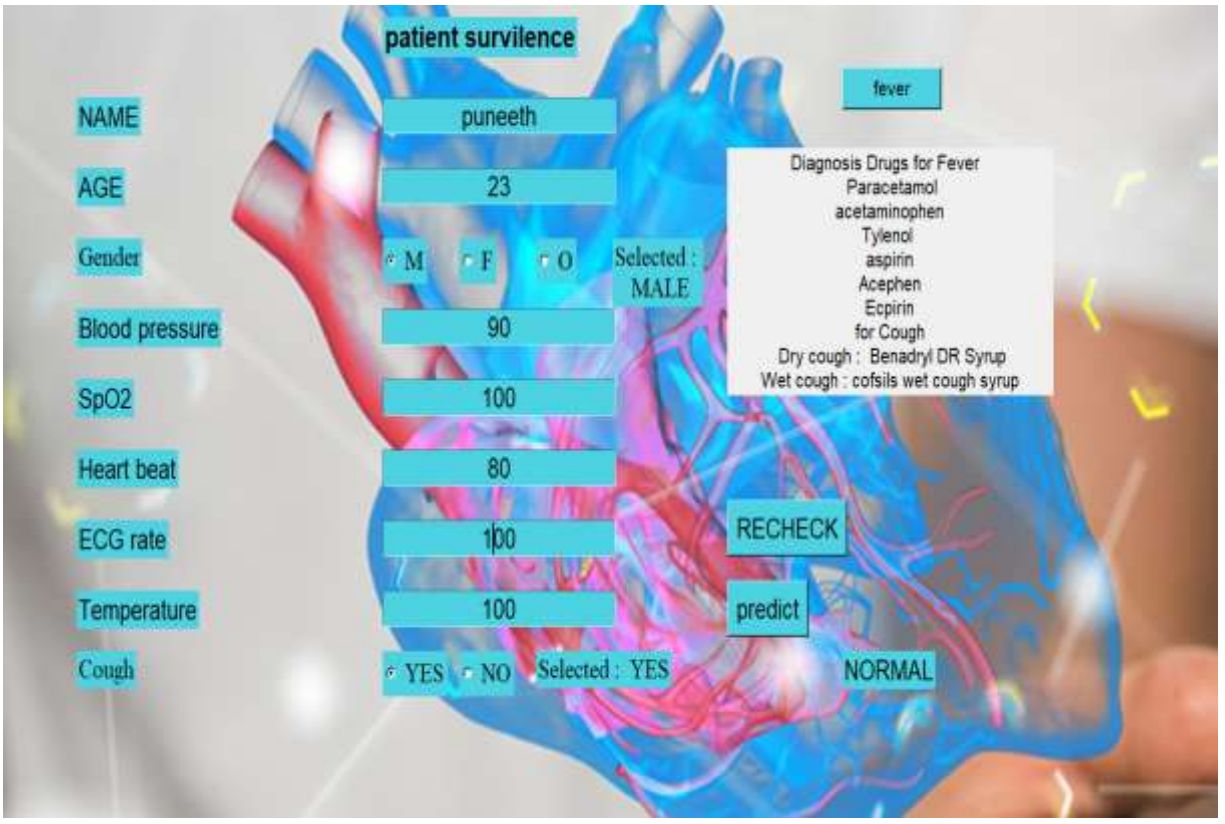

Fig:3.6 Prediction interface fever

This prediction interface not only evaluates patient vitals to determine health status but also provides possible diagnoses and suggested medications based on symptoms like fever or cough. It displays relevant drugs for fever and cough after prediction, enhancing decision-making support.

CHAPTER 4

REFLECTION

This chapter gives the brief introduction about the work experience and assessment in the company during the period of internship. It also gives the details about the technical outcomes after working in the company, the non-technical outcomes after working in the company such as improvement in verbal and written communication, personality development, time management, resource utilization skills and what are the contributions to the company during the period of internship. Reflection helps in developing self-awareness by encouraging introspection and understanding of one's thoughts, feelings, and behaviors. It allows individuals to identify their strengths, weaknesses, values, and beliefs, leading to a deeper understanding of themselves. Through reflection, individuals can extract valuable lessons from their experiences, both positive and negative.

1. Work Experience/Assessment

Work experience is any experience that a person gains while working in a specific field or occupation, but the experience is widely used to mean a type of volunteer work that is commonly intended for young people, often students to get a feel for professional working environment. The experience which I gained by working at Technofly Solutions are as listed below.

- The working environment at Technofly Solutions was good.
- Improved my Googling skill by learning things through Google which were required for the work.
- Availability of internet facility is good which helped in downloading the required documents very easily without any difficulties which were related to the work.
- Because of faster and easier access to the internet it was easier for me to understand the module clearly by seeing the videos on how the module works.
- Gained knowledge on Project development life cycle.
- Learned how project is decided, how project is assigned to employees, how project modules will be divided, how teams are formed in a company.
- Gained the knowledge of the database creation.
- Gained the basic knowledge on PYTHON platform.
- Learned how to do basic coding in python to develop an application.

- Improved communication skills. Learned how project is decided, how project is assigned to employees, how project modules will be divided, how teams are formed in a company.
- Improved communication skills.
- Internship was great opportunity to know the company environment.
- Learned how to co-ordinate with other employees.

Work experience encompasses the practical knowledge, skills, and professional insights gained through employment, internships, or volunteer positions. It is a crucial aspect of personal and professional development, offering a multitude of benefits and opportunities for growth.One of the key aspects of work experience is skills development. Through hands-on tasks and responsibilities, individuals acquire job-specific skills such as communication, teamwork, problem-solving, time management, technical proficiency, and industry-specific knowledge. These skills are essential for success in the workplace and contribute to career advancement. Work experience also provides valuable industry exposure. It allows individuals to gain insights into different industries, organizational structures, and work cultures. Exposure to diverse environments helps individuals understand business operations, industry trends, and professional expectations, preparing them for future roles and responsibilities.

Networking is another significant benefit of work experience. It provides opportunities to build professional relationships, and connect with mentors, colleagues, clients, and industry professionals. Networking opens doors to new opportunities, referrals, collaborations, and career advancement prospects. Moreover, work experience fosters continuous learning and career exploration. It enables individuals to explore various career paths, roles, and responsibilities, helping them identify their strengths, interests, and areas for growth. Continuous learning and career exploration are essential for personal and professional development, enabling individuals to stay adaptable, competitive, and resilient in the job market. Through hands-on tasks and responsibilities, individuals acquire job-specific skills such as communication, teamwork, problem-solving, time management, technical proficiency, and industry-specific knowledge. It allows individuals to gain insights into different industries, organizational structures, and work cultures. Exposure to diverse environments helps individuals understand business operations, industry trends, and professional expectations.

It enables individuals to explore various career paths, roles, and responsibilities, helping them identify their strengths, interests, and areas for growth.

4.2 Problems/Challenges

The problems and challenges are the one which we face during the period working. Problems which we face may include the problems which we face while performing the work which is assigned to us during the period of internship, problems which we face in co-coordinating with other co-workers, resources utilization problems and so on. The challenges may include how well and fast we are at performing the task assigned to us, ability to complete the work with fair utilization of the resources. It also includes how well we are good at solving the problems. Some of the problems and challenges which are faced during the internship period are as follows.

- The internship was much different from college academics and it takes little time to adjust to the environment and schedule.
- Initially it is a difficult to understand the works assigned to us.
- During Python training they made us to practice some of the Python programs on abstract classes an interfaces, found little difficult without practical knowledge.
- Before installing IDLE we use to do programs using notepad, at that time it was difficult for us to identify different types of errors.
- Learned about the QR code generation, used in the certificates for security purpose.

4.3 Technical Outcomes

The technical outcomes are necessary for measuring the effectiveness of an intervention, Identifying effective practices, Identifying practices that need improvement, proving your value to existing, Getting clarity and consensus around the purpose of your program, how well we are good at some technical aspect and to know the domain of interest. The following are some of the technical outcomes.

- Developing a technical artifact requiring new technical skills, using profession specific terminology appropriately.
- Effectively utilizing the tools and resources to complete a task, creating training materials and Maintaining and troubleshooting technology.
- Analyzing or visualizing data to create information, writing requirements documentation, selecting appropriate technologies.
- Acquiring and evaluating information, creating or modifying technology policies, Performing effective and informative user testing and Identifying and creating appropriate test cases for systems.

Applications of python: Machine learning is one of the applications of python

Python is widely used general purpose,high level programming language. It was initially designed by Guido van Rossum in 1991and developed by Python Software Foundation.It was mainly developed for emphasis on code readability, and its syntax allows programmers to express concepts in fewer lines of code.Python is a programming language that lets you work quickly and integrate systems more efficiently. Python was designed for readability, and has some similarities to the English language with influence from mathematics. Python uses new lines to complete a command as opposed to other programming language which often use semicolons or parentheses. The most recent major version of Python is Python 3, which we shall be using in this tutorial. Python can be used on a server to create web applications. It can be used along sidesoftware to create workflows. It can connect to database system and also read and modify files.Python can be used to handle big data and perform complex mathematics. It can be used for rapid prototyping, or for production ready software development. It works on different platforms (Windows, Mac, Linux, Raspberry Pi, etc). It runs on an interpreter system, meaning that code can be executed as soon as it is written. This means that prototyping can be very quick.

Training Undergone: It contains the information about the training which is undergone during the period of internship. It includes Software requirement specification, product development life cycle, Software testing.

Software requirements specification (SRS) is a description of a software system to be developed, laying out functional and non-functional requirements, and may include a set of use cases that describe interactions the users will have with the software. Software requirements specification establishes the basis for an agreement between customers and contractors or suppliers (in market-driven projects, these roles may be played by the marketing and development divisions) on what the software product is to do as well as what it

is not expected to do. Software requirements specification permits a rigorous assessment of requirements before design can begin and reduces later redesign. It should also provide a realistic basis for estimating product costs, risks, and schedules.

The software requirements specification document enlists enough and necessary requirements that are required for the project development. To derive the requirements we need to have clear and thorough understanding of the products to be developed or being developed. This is achieved and refined with detailed and continuous communications with the project team and customer till the completion of the software.

In industry, product development lifecycle is the process of the entire lifecycle of a product from inception, through engineering design and manufacture, to service and disposal of manufactured products.PDLC integrates people, data, processes and business systems and provides a product information backbone for companies and their extended enterprise.

Software testing is an investigation conducted to provide stakeholders with information about the quality of the product or service under test. Software testing can also provide an objective, independent view of the software to allow the business to appreciate and understand the risks of software implementation. Test techniques include the process of executing a program or application with the intent of finding software bugs (errors or other defects).

Software testing involves the execution of a software component or system component to evaluate one or more properties of interest. In general, these properties indicate the extent to which the component or system under test, meets the requirements that guided its design and development, responds correctly to all kinds of inputs, performs its functions within an acceptable time, is sufficiently usable, can be installed and run in its intended environments, and achieves the general result its stakeholders desire. Software testing can also provide an objective, independent view of the software to allow the business to appreciate and understand the risks of software implementation. To derive the requirements we need to have a clear and thorough understanding of the products to be developed or being developed. This is achieved and refined with detailed and continuous communications with the project team and customer till the completion of the software.This is achieved and refined with detailed and continuous communications with the project team and customer till the completion of the software.

4.4 Non-Technical Outcomes

Non-technical outcomes are the one which describes the individual development skills through working experience. It include soft skill development such as personality development, Communication skill development, improvement in one's confidence level, ability to handle the situation, ability to adjust to the environment, Ability to manage the time that is punctuality and so on.

- Demonstrating understanding of professional customs and practices by understanding the different rules of the company, the practices followed in the company.
- Organizing and maintaining information such as the organization structure, organization details, number of employees working in the company and information about how the organization is maintained are known.
- Applying knowledge to the task that is when a particular task is assigned we can make good use of the knowledge which is gained through attending various training and workshops.
- Negotiating and arriving at a decision which is to be done when performing a task. That is arriving at a quick decision at any critical situation which will help in solving a problem.
- Working with diversity/diverse populations that is, learned how to work under pressure and learning how to coordinate with different people in the company with different mentality.
- Identifying, understanding and working with professional standards, working in cross-cultural and/or multicultural settings and learning how to learn.
- Improving problem-solving and critical thinking skills by handling a problem in a good manner with occurrence of negative consequences.
- Monitoring and correcting performance, exercising leadership by taking the responsibilities voluntarily and making sure that it goes in a right path without any problems.
- Behaving professionally, behaving ethically, listening effectively, and dressing appropriately.
- Addressing colleagues and superiors appropriately that is learning to address the higher authorities with a specified manner.

- Allocating time effectively that is learning to complete the task with in a deadline without any problem and with the successful output.
- Teaching others, adapting effectively to changing conditions that is by learning how to adjust with the changing environment and with the changing people in a short period of time so that it cannot affect the work.
- Participating as a member of a team by contributing some works to the team which will lead to the team development.
- Developing appropriate workplace attitudes, Understanding and managing personal behavior and attitudes.
- Developing individual responsibility by completing the work within the assigned time.

Skills: Skills describes the improvement in the individual personality by working in the new environment. Skills differ from one person to another.

- Can acquire and evaluate information - can identify need for data, can obtain it from existing sources or can create it, and can evaluate its relevance and accuracy
- Can organize and maintain information - can organize, process and maintain written or computerized records and other forms of information in a systematic fashion
- Can interpret and communicate information - can select and analyze information and communicate the results to others using oral, written, graphic, pictorial, or multimedia methods
- Can use computers to process information - can employ computers to acquire, organize, analyze and communicate information
- Can exercise leadership - can communicate thoughts, feelings and ideas to justify a position; can encourage, persuade, convince, or otherwise motivate an individual or group, including responsibly challenging existing procedures, policies or authority
- Can negotiate - can work towards an agreement that may involve exchanging specific resources or resolving divergent interests
- Can work with cultural diversity - can work well with men and women and with a variety of ethnic, social or educational backgrounds

4.5 Benefits of Doing Internship

1. **Gain Valuable Work Experience:** An internship provides the opportunity to gain hands on work experience that is not possible to get in the classroom and also companies train interns and help in gaining the experience required to get a job.
2. **Transition into a Job:** Employers see interns as prospective employees, so by performing well one can finish internships and continue working with the company full time. Internships are the number one way for employers to find new staffs and employees to find a new job with experience.
3. **Networking Opportunities:** Internships are a great way to meet people in specific field of our interest. An internship allows meeting people who might help in getting a job later on and give the contacts of the industry to which we are interested and break into it. Plus, references from people in the industry will really add weight to the application.
4. **Apply Classroom Knowledge:** An internship can be seen as the pinnacle of the education and give a chance to use the skills learned in the classroom in a real-world setting. It's a chance to prove the worth of the qualifications and to show the ability to perform a role that has been assigned.
5. **Gain Confidence:** Getting experience is a great way to build the confidence. Having an impressive resume will help in boosting the confidence level and it increases the chances of securing a job.

4.6 Contribution to the Organization

This session describes what is our contribution to the organization being a intern. It includes how the company is benefited from us and from our work, how well our work will be useful for the company, how our work will profit the company and includes other details. I am a hard worker with the experience to get things done efficiently. I can contribute my organizational skills and my ability to work well in a group. I have the knowledge to contribute to the rapid growth of this business.

CONCLUSION

Machine learning approaches have significant potential in prediction of general diagnosis patients. Future steps in developing predictive models for health will utilize a comprehensive predictive framework combining multiple data streams, and further optimization of feature selection, data set preparation, and machine learning approaches may significantly enhance resulting algorithms. Predictive modelling of general diagnosis may be relevant to developing effective predictive frameworks in other health conditions.

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