

# INTERNSHIP CERTIFICATE

zimetrix

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Web: [www.zimetrix.com](http://www.zimetrix.com)

ZIMETRICS TECHNOLOGIES PRIVATE LIMITED

Date: 02/06/2023

## TO WHOM IT MAY CONCERN

This is to certify that Mr. Varad Prabhugaonkar, a student of Master of Computer Applications (MCA) of Goa University, Goa is doing an Internship program at Zimetrix Technologies Pvt Ltd dated 3<sup>rd</sup> January 2023 – Till date.

During his tenure, he has met the expectations of his team mentor and was found to be regular and sincere.

He has exhibited overall very good conduct, and professionalism during this period.

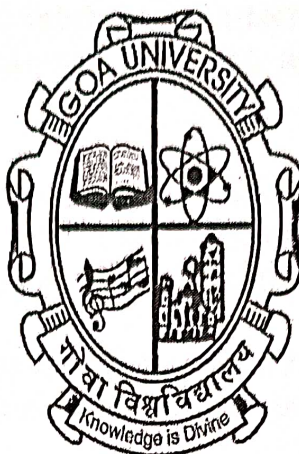
This certificate is being issued on his request to be submitted with the project report at Goa University.

Yours sincerely,  
For Zimetrix Technologies Pvt. Ltd.

*Swati Patil*

Swati Patil - Head HR

# GOA UNIVERSITY



## GOA BUSINESS SCHOOL

### CERTIFICATE OF EVALUATION

This is to certify that Mr. Varad Prabhugaonkar has been evaluated for the project work titled "Report of Internship done at Zimetrics Technologies Private Limited" undertaken at Zimetrics Technologies Private Limited, Pune in partial fulfillment for the award of the degree in Master of Computer Applications.

Examiner 1

Examiner 2

Place: Goa University

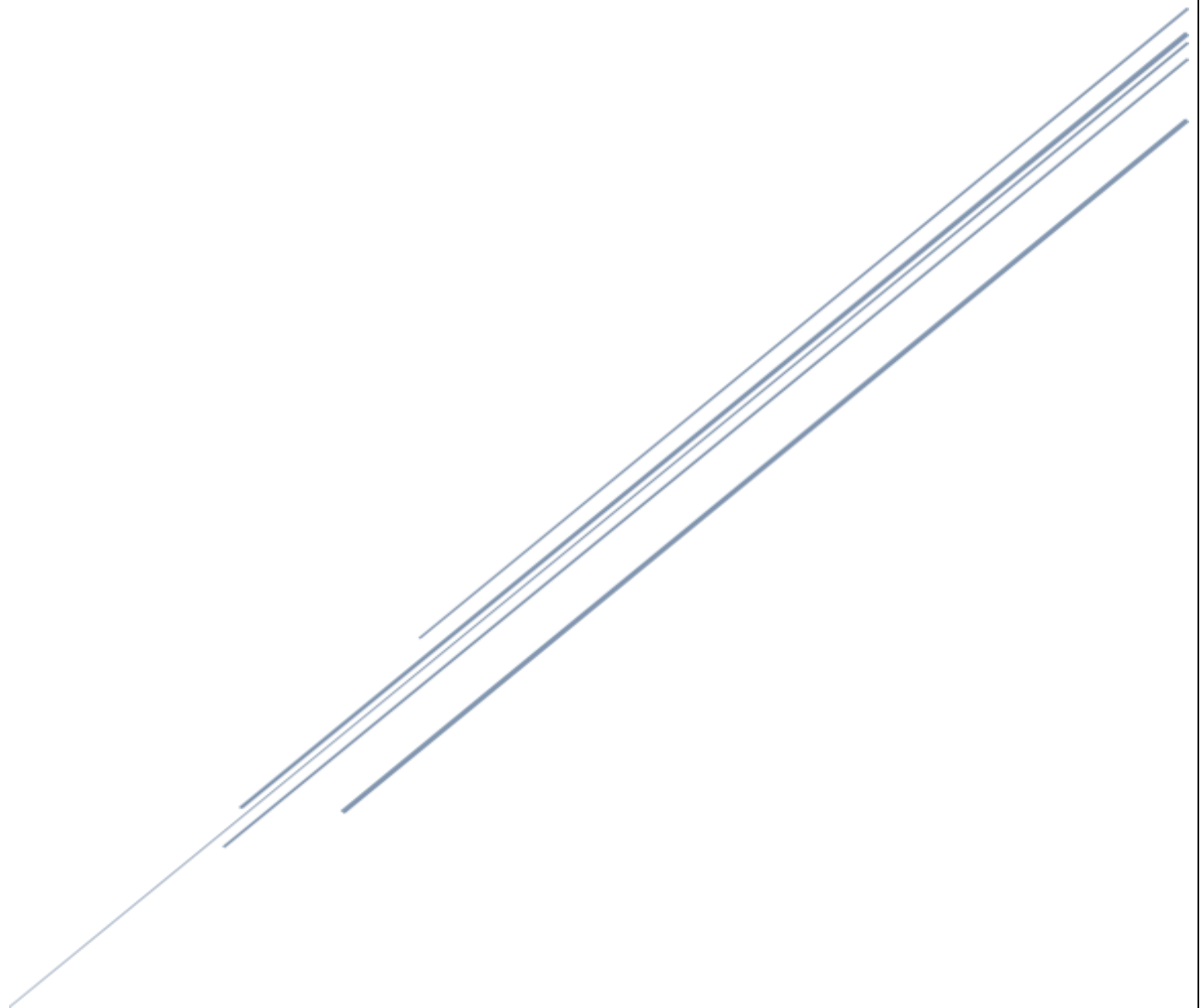
Date: 17/06/2023

Dean, Goa Business School



# **INTERNSHIP REPORT**

**VARAD DNYANANAND PRABHUGAONKAR  
2123**



**REPORT OF INTERNSHIP DONE AT ZIMETRICS TECHNOLOGIES  
PRIVATE LIMITED**

**Completed By**

**VARAD PRABHUGAONKAR**

**2123**

**for the partial fulfillment of  
MCA Degree for Semester IV  
Discipline of Computer Science and Technology,  
Goa Business School,  
Goa University**

**At**

**Zimetrics Technologies Private Limited**

**A-wing, 6th Floor  
Suntek Kanaka Corporate Park  
Patto Plaza  
Panaji, Goa - 403001**

**Under the guidance of**

**Mr. Omkar Prabhu**

(Center Head - Goa RDC.at Zimetrics  
Technologies)

**Mr. Joshua Salema**

(Sr. System Analyst at Zimetrics  
Technologies)

# INTERNSHIP CERTIFICATE



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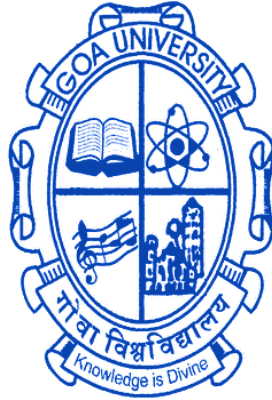
Yours sincerely,  
For Zimetrics Technologies Pvt. Ltd.

*Swati Patil*

Swati Patil - Head HR

CIN: U72900PN2015PTC153852, GSTIN 27AAACZ8110B1Z0  
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Examiner 1

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Examiner 2

Place: Goa University

Date: 17/06/2023

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Dean, Goa Business School

## ACKNOWLEDGEMENT

It's great to get an opportunity to work as an intern in a company as you get to learn new technologies, get industry exposure and to put all the knowledge you have into practical work.

I am very grateful to get support from all the seniors initially when I started with the internship and so thereafter. The internship would not be complete without expressing gratitude to everyone who led me throughout the internship period.

I thank Mr. Vikas K Verma (Founder & President of Engineering at Zimetrics Technologies) for giving me the opportunity to work as an intern at Zimetrics Technology Private Limited.

I would like to thank Mr. Omkar Prabhu (Center Head - Goa RDC.) for giving me the opportunity to intern at Zimetrics Technology Private Limited, for making me feel comfortable in the new environment and to guide me along the way.

I sincerely express gratitude to Mr. Joshua Salema (Sr. System Analyst at Zimetrics Technologies) for always being supportive and guiding me in completing the project.

I extend gratitude to Ms. Swati Patil (Head - HR Zimetrics Technology Pvt. Ltd.), Mr. Shantanu Waghmare (Associate Manager - Human Resource at Zimetrics Technologies Pvt Ltd), Shrikant Waghulkar (Sr. Manager- Learning & Development HR) and Ammar Kothari (Sr Manager Recruitment) for helping me out whenever needed.

I would also like to thank Ms. Ankita Raul (Office Admin, Zimetrics) for always being so kind, friendly and caring towards me.

I thank Ms. Jyoti Pawar (Dean, Goa Business School, Goa University), Mr. Hanumant Redkar (Prof. and Placement Coordinator, MCA, Goa Business School, Goa University), Mr. Ramrao Wagh (H.O.D, Dept. of Computer Science and Technology) and all the faculty of MCA, Goa University for their constant encouragement and support during the project work.

I would like to thank all my friends for helping me enhance my skills and for encouraging me. Their constant support has been of central importance.

Finally, I would like to express my gratitude towards all my colleagues at Zimetrics, especially Saiprasad Naik for being so helpful, kind, and friendly in nature.

- **Varad Prabhugaonkar**

## **TABLE OF CONTENTS**

<b>Introduction</b>	<b>7</b>
<b>Company Profile</b>	<b>8</b>
<b>Project – Patient Management App</b>	<b>9</b>
Problem Statement	9
Overview	9
My Contributions	11
Tools and Technologies used	15
<b>Other tasks</b>	<b>16</b>
<b>Certifications and Trainings Completed under Internship and Self Study</b>	<b>17</b>
<b>Project timeline/Project diary</b>	<b>18</b>
<b>Reflections/ Experiences of Internship</b>	<b>23</b>
<b>References</b>	<b>24</b>



## **INTRODUCTION**

This report includes a short description of my full-time internship at Zimetrics Technologies Private Limited.

I joined as an intern in Zimetrics on 3rd January 2023. This report contains all the necessary information about the company, the project I have worked on, the training I have received, and some other tasks that I completed in this internship period.

In the following sections I shall include information about the company, the work and culture over here. I shall also include details of the project I worked on, a brief description of the project, the modules I built and the tasks I completed in those modules.

This report emphasizes my learning experience and contribution to the organization as an intern. This will describe the knowledge that I gained by successfully completing the tasks that were assigned to me.

I'll also be talking about the tools and technologies that were used followed by my internship timeline. I shall conclude by sharing my experience and how it has helped me to grow, both on the personal and professional front.

## COMPANY PROFILE

Zimetrics is a niche technology provider and solutions enabler for IoT, Machine data, Big Data analytics, and Data Science.

Zimetrics is a Confluent & HashiCorp Partner and recognized as the "Top 20 IoT Solutions Providers" by CIO Outlook APAC.

Founded in 2015, Zimetrics today serves leading global enterprises across Industrial, Oil & Gas, FMCG, MedTech, Internet Advertising, and Retail. Learn of our expertise and transformational value creation stories in Digital Media Analytics, Retail Analytics, Marketing Analytics, Customer Data Analytics, Video Analytics, Big Data, IOT, Machine Vision, Natural language Processing, Machine Learning, and Deep Learning.

### RESEARCH AND INNOVATION AT CORE

Innovation and research are at the center stage for Zimetrics. Zimetrics is heavily open-source-driven and invests heavily in research across data engineering, decision models, computer vision, and embedded technology.

### ACROSS LOCATIONS & GROWING

Zimetrics is headquartered in India, Pune. Zimetrics has regional delivery centers in Goa, Delhi, NCR, and Bangalore (upcoming) in India. Zimetrics has network delivery centers in Canada, British Columbia, and in the USA which helps in delivering a seamless cross-time zone network execution experience. The fundamentals and aims of Zimetrics are as follows:

Big Data	Machine Data	Enterprise AI	IoT
<ul style="list-style-type: none"><li>➤ BigData Data Platforms</li><li>➤ Augmented Classical BI</li><li>➤ BigData Data Warehousing</li><li>➤ Cloud Data Platforms</li><li>➤ Big Search Solutions</li><li>➤ Deep Information Analytics</li></ul>	<ul style="list-style-type: none"><li>➤ Human Interaction Analytics</li><li>➤ Transport Telemetry Solutions</li><li>➤ Connected Car Solutions</li><li>➤ Log processing solutions</li></ul>	<ul style="list-style-type: none"><li>➤ Machine Learning</li><li>➤ Deep Learning</li><li>➤ Predictive Modelling</li><li>➤ Recommendation Engines</li><li>➤ NLP &amp; Text Mining</li><li>➤ Sematic Intelligence Solutions</li><li>➤ Machine Scoring &amp; Quality Analysis</li></ul>	<ul style="list-style-type: none"><li>➤ IoT Data platforms</li><li>➤ Smart Sensor solutions</li><li>➤ Augmented Industrial IoT</li><li>➤ Legacy to IoT</li><li>➤ IoT Machine Learning</li><li>➤ Converged IoT solutions</li></ul>

## PROJECT – PATIENT MANAGEMENT APP

### PROBLEM STATEMENT

The current healthcare system lacks an efficient and user-friendly patient management solution. There is a need to develop a simple and intuitive Patient Management app using OutSystems that streamlines tasks like appointment scheduling, medical record management, and communication, while ensuring data security and integration with existing healthcare systems.

### OVERVIEW

The project consists of the following things: -

#### OVERVIEW

A patient management app is a software application designed to assist healthcare providers in effectively managing and organizing patient-related information. It serves as a central platform to streamline various aspects of patient care, including appointments, medical records, communication, and billing. Here's an overview of the typical features and functionalities you can expect to find in a patient management app:

- **Patient Registration and Profile Management:** The app allows healthcare providers to register new patients and maintain comprehensive profiles. This includes capturing personal details, contact information, medical history, allergies, and any other relevant data.
- **Appointment Scheduling:** The app provides a scheduling system that enables healthcare professionals to manage patient appointments efficiently. It allows them to view available time slots, book appointments, send reminders to patients, and handle rescheduling or cancellations.
- **Electronic Medical Records (EMR):** The app facilitates the digital storage and management of patient medical records. It allows healthcare providers to create, access, and update electronic medical records, including medical history, diagnoses, test results, treatment plans, and prescriptions.

- **Prescription Management:** The app may include features for electronically managing prescriptions. Healthcare providers can generate and send prescriptions to pharmacies digitally, improving accuracy and convenience.
- **Patient Monitoring and Alerts:** Some patient management apps provide monitoring and alert systems to track patient progress and notify healthcare providers of any critical changes or issues. This can include reminders for medication adherence or monitoring vital signs remotely.
- **Analytics and Reporting:** The app may offer analytical capabilities, generating reports and insights based on patient data. This helps healthcare providers identify trends, track outcomes, and improve overall patient care.

## MY CONTRIBUTIONS

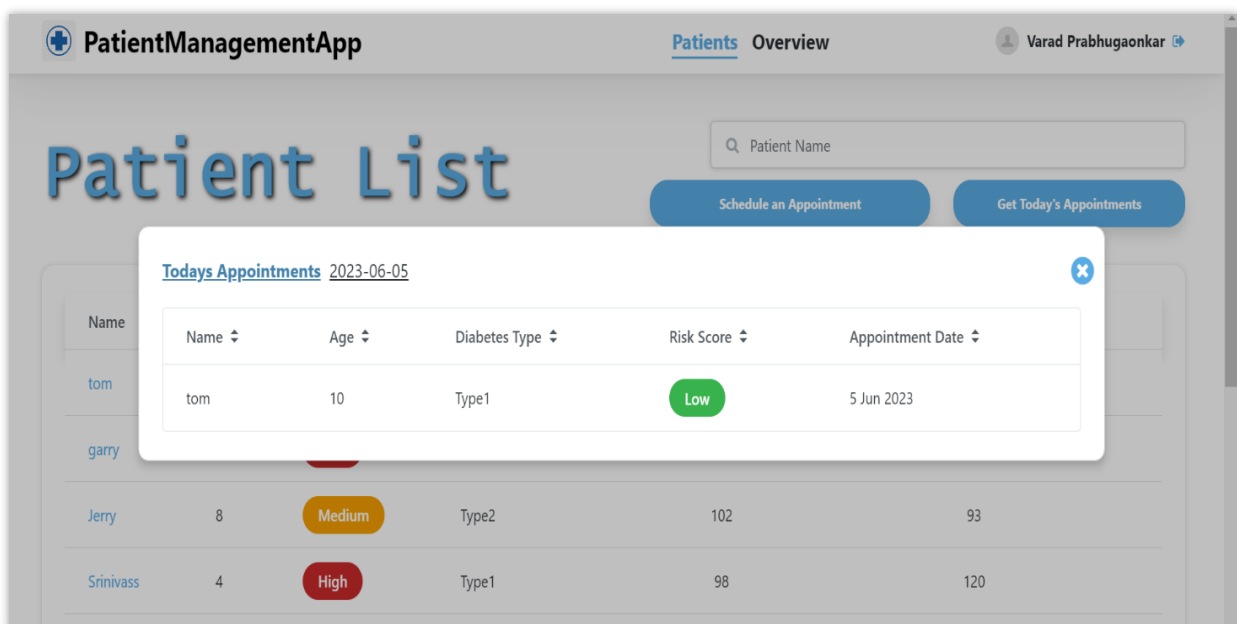
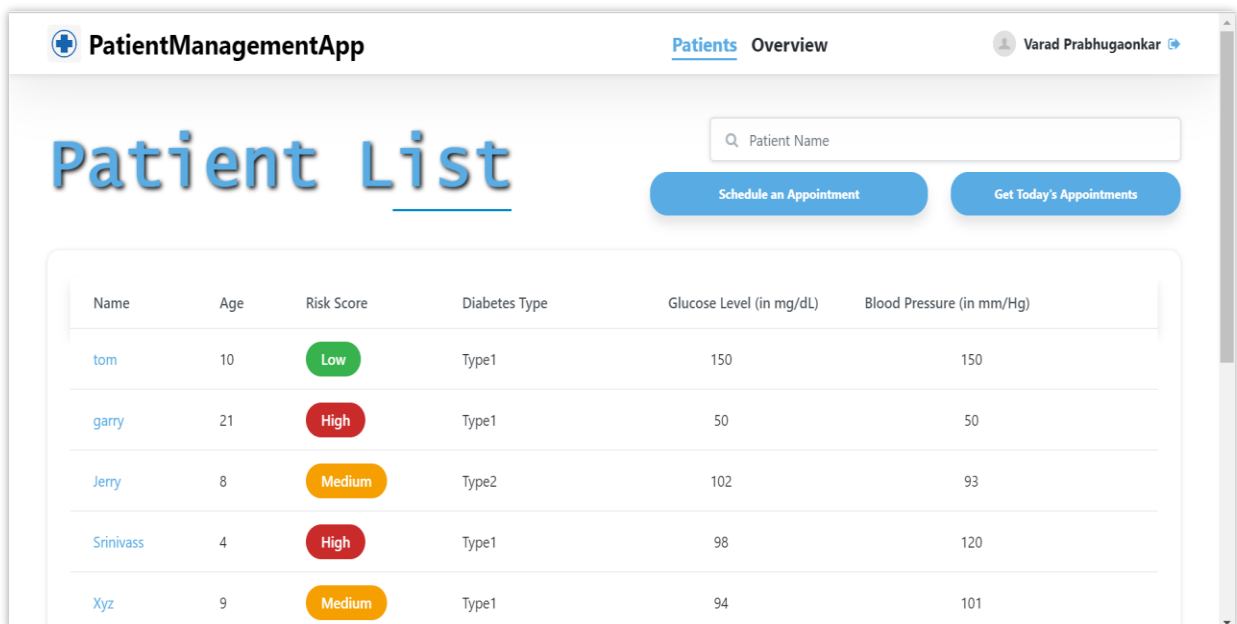
I was assigned to work on the Patient Management App where in my responsibilities were on:

### Patients List Page (Landing Page):

Table: Supports sorting and pagination, and patient name links to patient details page

Search Patient: To search for a particular patient.

Button: Displays appointments scheduled for that very day

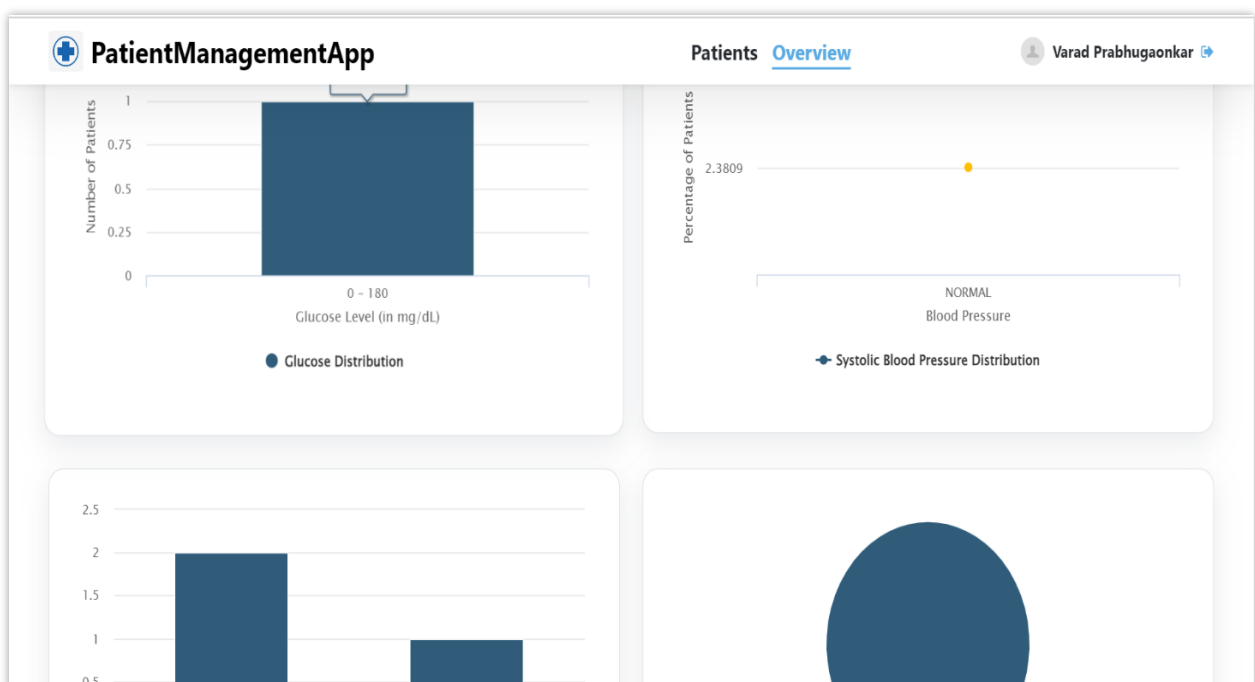
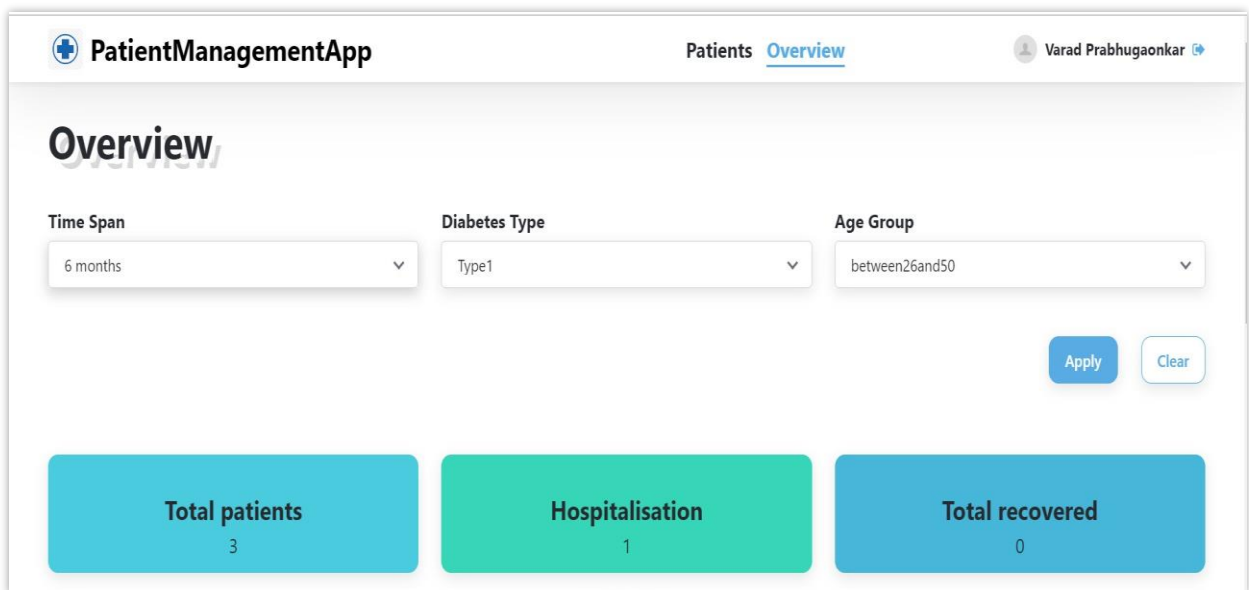


## Overview Page:

Filters: Time Span (30/60/90/6 months/1 year/>1 year), Diabetes Type (type 1, type 2, both), Age Group (0-25/26-50/51-75/76 and above, any age)

Counters: Total Patients, Hospitalizations, Total Recovered

Charts: Glucose Level (Bar), Blood Pressure (Line), Location Distribution (Bar), Diabetes Type (Pie)



## Patient Details Page:

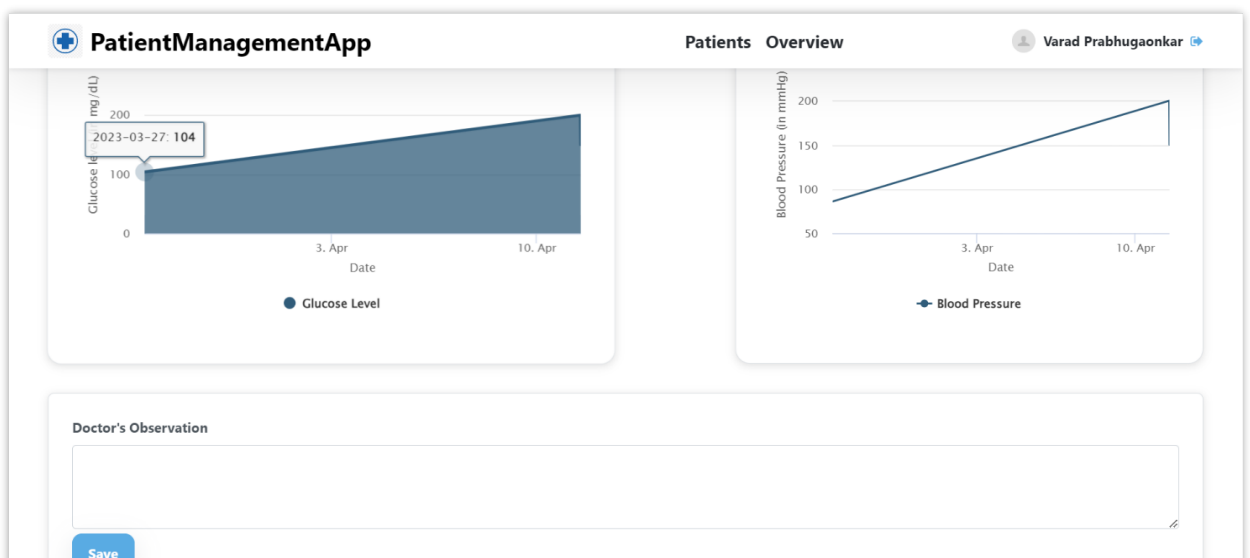
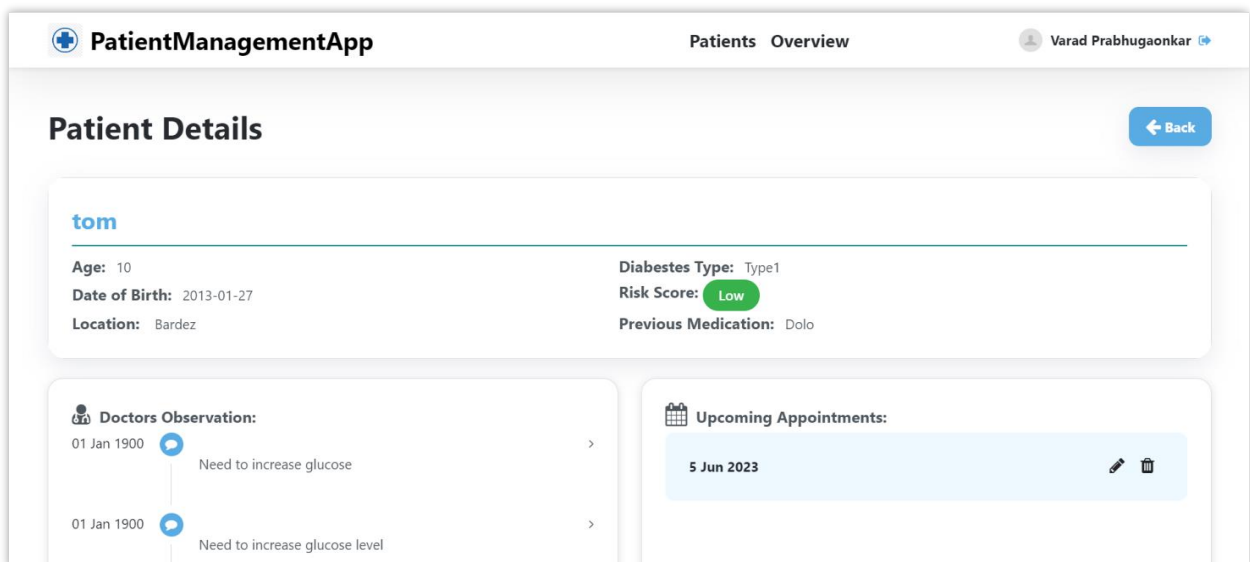
Display patient details: Name, age, location, risk score, diabetes type, date of birth, etc.

Doctor's observations: Form with a text area to record observations, displayed using a timeline widget.

Glucose area chart: Shows glucose levels over time (x-axis: date, y-axis: glucose)

Blood pressure line chart: Illustrates blood pressure trends (x-axis: date, y-axis: blood pressure)

Upcoming appointments list: Includes buttons to add medical data, edit, and delete appointments.

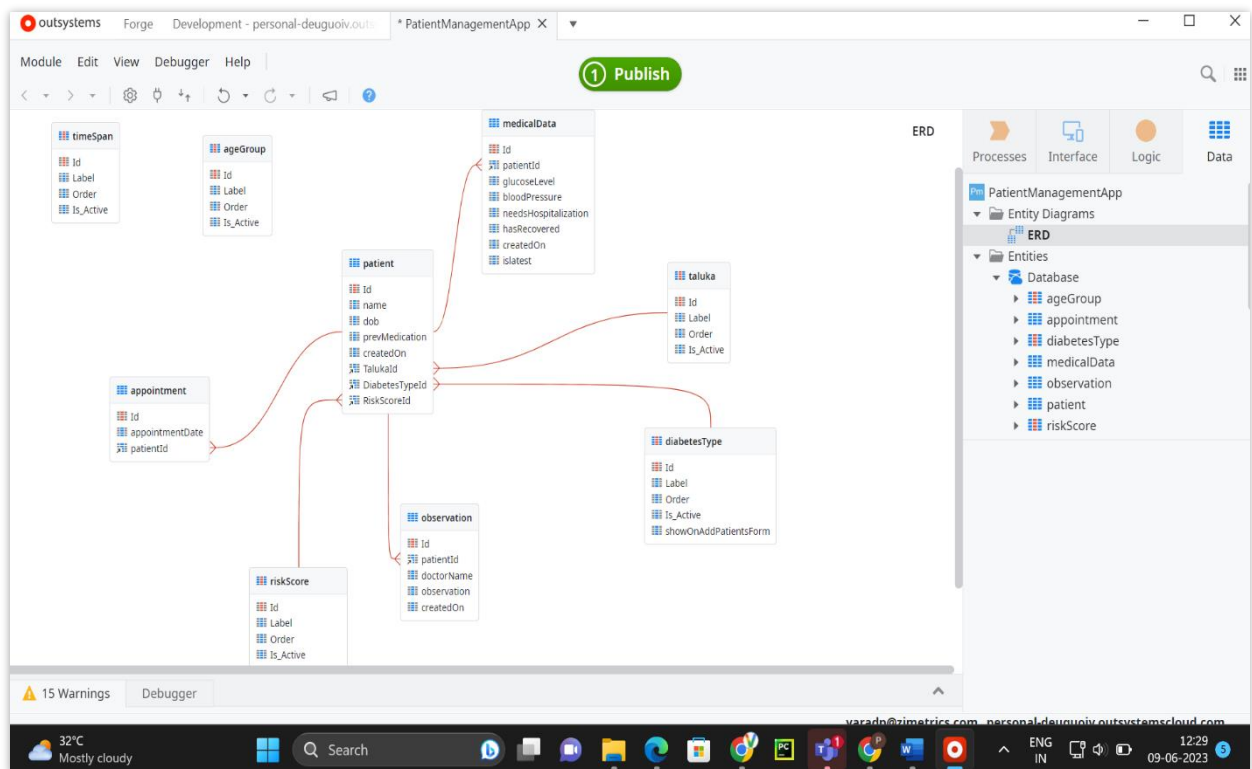


## Appointment Page:

Schedule Appointment: Form to schedule an appointment, with options to search and select an existing patient or create a new one.

The screenshot shows a web browser window with the URL `personal-deuguioiv.outsystemscloud.com/PatientManagementApp/ScheduleAppointment`. The page title is "PatientManagementApp" and the user is "Varad Prabhugaonkar". The main heading is "Patients". Below it, there is a search bar with the text "tom". To the right of the search bar is a button "Add appointment for New Patient". Below the search bar, there is a form with three fields: "Name \*" with the value "tom", "Date of Birth \*" with the value "27-01-2013", and "Location \*" with the value "Bardez".

## ERD





## TOOLS AND TECHNOLOGIES USED

OutSystems is a low-code development platform that enables organizations to build and deploy web and mobile applications with speed and efficiency. It provides a visual development environment that allows developers to create applications by dragging and dropping pre-built components, eliminating the need for extensive coding. Here's an overview of the key features and benefits of the OutSystems platform:

**Low-code development:** OutSystems is a leading low-code platform that allows developers to build applications quickly and easily through visual development tools. The platform abstracts complex coding tasks, enabling developers to focus on building the application's functionality.

**Rapid application delivery:** With OutSystems, organizations can accelerate the development and delivery of web and mobile applications. The visual development environment, pre-built components, and templates enable faster development cycles, reducing time-to-market for new applications.

**Cross-platform capabilities:** OutSystems supports the development of applications that run on multiple platforms, including web, mobile, and desktop. Developers can create responsive applications that automatically adjust to different screen sizes and devices, providing a consistent user experience.

**Seamless integration:** OutSystems facilitates seamless integration with existing systems, databases, and external APIs. It offers a range of connectors and integration options to enable data exchange and interaction with other systems, ensuring interoperability with legacy infrastructure.

**Scalability and performance:** OutSystems applications are designed to be scalable and performant. The platform optimizes the generated code, implements caching mechanisms, and provides scalability features like load balancing, allowing applications to handle increased user demand efficiently.

## OTHER ADDITIONAL TASKS

### **HTML**

Learned the basics of HTML markup language and created web pages with proper structure and elements.

### **CSS:**

Explored CSS styling techniques to enhance the visual appearance of web pages, including layout, colors, and typography.

### **JavaScript:**

Studied JavaScript programming language to add interactivity and dynamic functionality to web pages.

### **UiPath:**

Acquired skills in UiPath, a popular Robotic Process Automation (RPA) tool, to automate repetitive tasks and streamline business processes.

### **Git Commands:**

Familiarize yourself with the Git version control system and learn essential Git commands to manage source code and collaborate with team members.

### **SQL:**

Developed proficiency in SQL (Structured Query Language) to interact with relational databases, perform database operations, and retrieve data using queries.

### **Python:**

Gained proficiency in Python programming language, covering core concepts, data structures, and implementing various algorithms and projects.

### **Agile Methodologies:**

Learned Agile development methodologies, such as Scrum or Kanban, and experienced working in an Agile team environment to deliver projects in iterative cycles.

### **Amazon S3:**

Explored Amazon S3 (Simple Storage Service) and learned to utilize it for scalable, secure, and reliable storage of data and files in the cloud.

### **Certifications and Trainings Completed under Internship and**

#### **Self Study:**

#### **Certifications**

- Introduction to Data Analytics on Simplilearn
- Getting Python Interview Ready on Simplilearn

#### **Other self-study**

- Earned badges in LinkedIn Skill Assessment
- Earned badges in Google cloud skills boost

## PROJECT TIMELINE

### **JANUARY 2022:**

#### **Week 1:**

- Installed MySQL Workbench and set up the required configurations.
- Studied SQL (Structured Query Language) basics, including creating tables, inserting data, and retrieving data with SELECT statements.

#### **Week 2:**

- Continued learning and practicing SQL, focusing on more advanced topics such as JOINS, subqueries, and data manipulation statements (UPDATE, DELETE).
- Explored additional features of MySQL Workbench for database administration and optimization.

#### **Week 3:**

- Started learning the Python programming language.
- Covered the basics of Python syntax, variables, data types, conditionals (if statements), loops, and functions.
- Worked on simple Python programs to solidify the understanding of concepts.

#### **Week 4:**

- Continued learning Python, diving into more advanced topics like file handling, error handling, and object-oriented programming.
- Developed more complex Python programs, including mini-projects or exercises to apply the acquired knowledge.

### **FEBRUARY 2022:**

#### **Week 1:**

- Started learning about Amazon S3 (Simple Storage Service), a cloud storage solution.
- Explored the features and capabilities of S3, such as creating buckets, uploading, and managing objects, and setting

permissions.

- Completed assignments or exercises related to AWS S3 to practice the concepts learned.

## **Week 2:**

- Dived into Git, a version control system for tracking changes in code repositories.
- Covered Git concepts such as repositories, branches, commits, and merging.
- Explored common Git workflows and best practices for collaborating with a team on a project.
- Learned how to use Git commands through the command line or graphical user interfaces (e.g., Git Bash, GitKraken).

## **Week 3:**

- Explored Agile methodologies, specifically Scrum and Kanban.
- Learned about the Agile principles, roles (Scrum Master, Product Owner, Development Team), and ceremonies (Sprint Planning, Daily Standup, Sprint Review, Retrospective).
- Understood the Kanban board and its use for visualizing and managing work in progress.
- Explored Agile project management tools like Jira or Trello and their integration with Agile methodologies.

## **Week 4:**

- Installed UI Path, a popular Robotic Process Automation (RPA) tool.
- Explored the basic functionalities and features of UI Path, such as creating automation workflows, using activities, and handling data inputs and outputs.
- Covered fundamental concepts of RPA and how UI Path can be used to automate various business processes.

## **MARCH 2022:**

### **Week 1:**

- Continued with UI Path, completing additional assignments and exploring advanced features.
- Strengthened proficiency in UI Path and robotic process automation.

### **Week 2:**

- Started learning OutSystems, a low-code development platform for web and mobile apps.
- Explored basic concepts and created applications using visual modeling and drag-and-drop components.

### **Week 3:**

- Continued with OutSystems, delving deeper into features and functionalities.
- Explored data modeling, integration, and implementing business logic.

### **Week 4:**

- Started the OutSystems project, applying the acquired knowledge to develop a real-world application.

## **APRIL 2022:**

### **Week 1:**

- Worked on the OutSystems project, specifically designing forms and user interfaces for the Patient Management app.
- Focused on creating intuitive and user-friendly interfaces to capture patient information effectively.

### **Week 2:**

- Continued working on the OutSystems project, specifically focusing on the database integration within the OutSystems platform.
- Implemented server actions to handle data retrieval, storage, and manipulation for the Patient Management app.

### **Week 3:**

- Developed an overview page for the Patient Management app, incorporating charts and counters to provide real-time insights and metrics.
- Utilized OutSystems built-in charting capabilities and data aggregation features to present meaningful information to users.

### **Week 4:**

- Enhanced the UI of the Patient Management app by incorporating external URLs and online resources.
- Utilized third-party libraries or templates to improve the visual aesthetics and user experience of the application.

## **MAY 2022:**

### **Week 1:**

- Explored and implemented additional functionalities within the OutSystems platform for the ongoing project.
- Worked on enhancing the capabilities and user experience of the Patient Management app.

### **Week 2:**

- Dedicated time to learning JavaScript, a popular programming language for web development.
- Applied JavaScript concepts and techniques to enhance the functionality and interactivity of the OutSystems project.

### **Week 3:**

- Started designing a personal portfolio using HTML, CSS, and JavaScript.
- Created the structure and layout of the portfolio, focusing on showcasing skills, projects, and personal information.

#### **Week 4:**

- Completed the design and development of the personal portfolio using Bootstrap, a CSS framework.
- Learned techniques to make the website responsive, ensuring optimal viewing experience across different devices.

#### **June 2023:**

##### **Week 1:**

- Utilized OutSystems Developer Cloud (ODC) to earn a developer badge by exploring its features, development environments, deployment processes, version control, and collaboration tools. Engaged in practical exercises and projects to strengthen application development skills.

##### **Week 2:**

- Explored Highcharts, a powerful JavaScript charting library, and integrated it into the OutSystems project. Learned about different chart types, configuration options, and customization techniques to create visually compelling and interactive charts. Applied Highcharts to visualize data in a meaningful way, enhancing the overall user experience of the application.



## **REFLECTIONS/ EXPERIENCES OF INTERNSHIP**

My experience of working as an intern at Zimetrics has been wonderful. I started working on Google Cloud Platform which was new to me. It was great learning new technologies. I found myself growing after joining the company.

The work environment at Zimetrics is very good. There is freedom given to interact or seek help from seniors.

Apart from work, there are Recreational activities being conducted once every week where all members come together and play some indoor games. Once a month, a meeting is conducted wherein all members talk about their work.

You are appreciated for the work you do successfully, which motivates you to do your work and get help whenever needed.

Overall, I am happy to be a part of Zimetrics. My best wishes to everyone here.

## REFERENCES

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