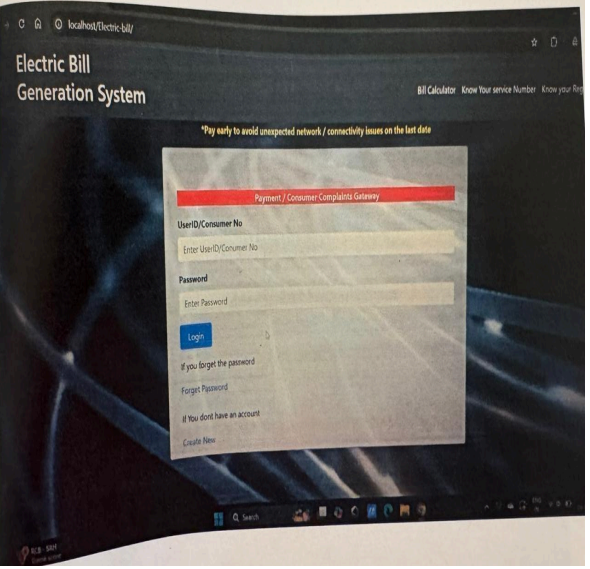
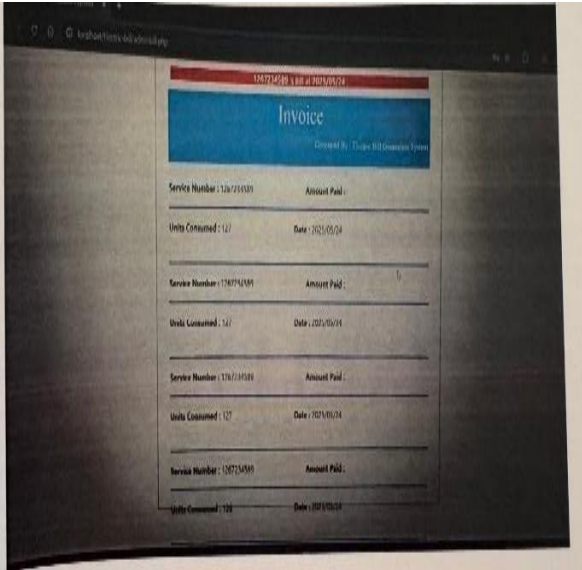


□ **Research and Development Cell**

**Consultancy Projects**

PROJECT TITLE & DESCRIPTION	SNAPSHOTS
<p><b>1) ONLINE ELECTRICITY BILLING SYSTEM</b></p> <p><b>AIM:</b> The aim of the Online Electricity Billing System is to develop a web-based application that automates the electricity billing process. It helps in accurate calculation of electricity consumption and bill generation. The system reduces manual work and minimizes errors in billing. It provides consumers with easy access to view and pay their electricity bills online. Overall, the project aims to improve efficiency, transparency, and convenience in electricity billing.</p> <p><b>CONCLUSION:</b> The Online Electricity Billing System successfully automates the traditional billing process. It ensures accurate bill calculation and timely bill generation. The system reduces paperwork and saves time for both electricity providers and consumers. They can easily view their usage details, bills, and payment history online. The payment features make the billing process faster and more convenient. The system also improves data management and reduces human errors. Thus, this project provides a reliable, efficient, and user-friendly solution for electricity billing.</p>	 

## 2) DEEP LEARNING BASED FACE SKIN CANCER CLASSIFICATION SYSTEM

**AIM:** The aim of the Deep Learning Based Face Skin Cancer Classification System is to develop an intelligent system for early detection of skin cancer from facial images.

The project uses deep learning techniques to classify skin lesions as cancerous or non-cancerous.

It helps in improving diagnostic accuracy and reducing human error.

The system assists doctors by providing fast and reliable preliminary analysis.

Overall, the project aims to support early diagnosis and better treatment planning

### CONCLUSION:

The Deep Learning Based Face Skin Cancer Classification System demonstrates the effective use of deep learning in medical image analysis.

It enables accurate classification of facial skin cancer using trained models.

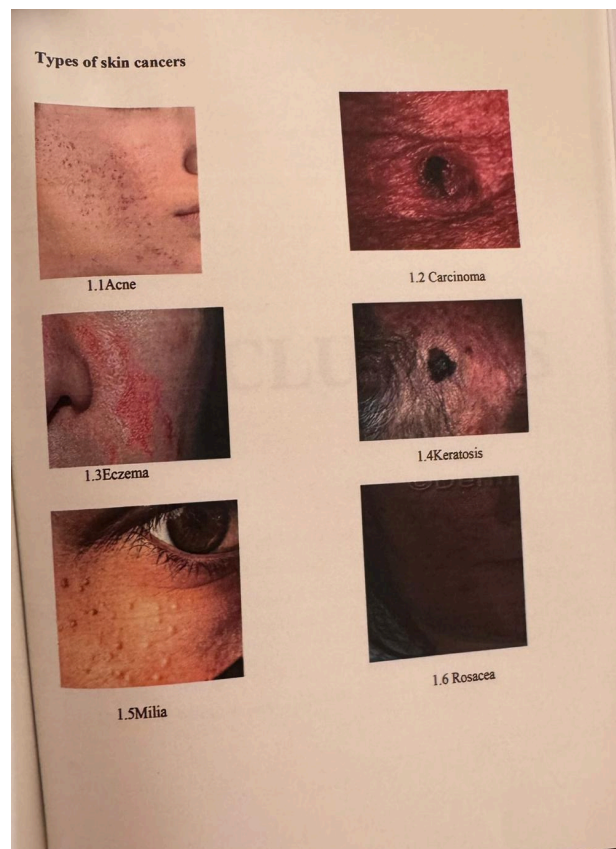
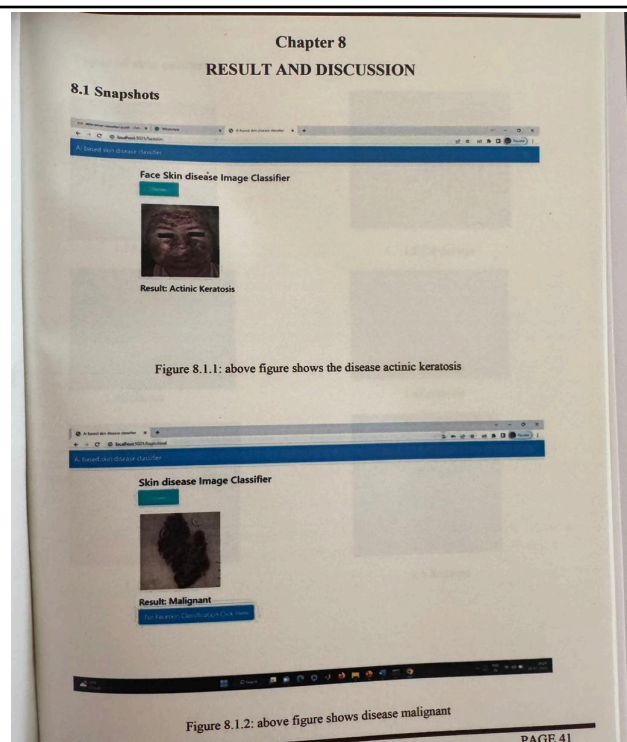
The system reduces dependency on manual examination and speeds up the diagnostic process.

Early detection through this system can help in timely treatment and improved patient outcomes.

The project highlights the importance of AI in healthcare applications.

It can be further enhanced with larger datasets and improved model accuracy.

Thus, the system provides a reliable and supportive tool for skin cancer diagnosis.

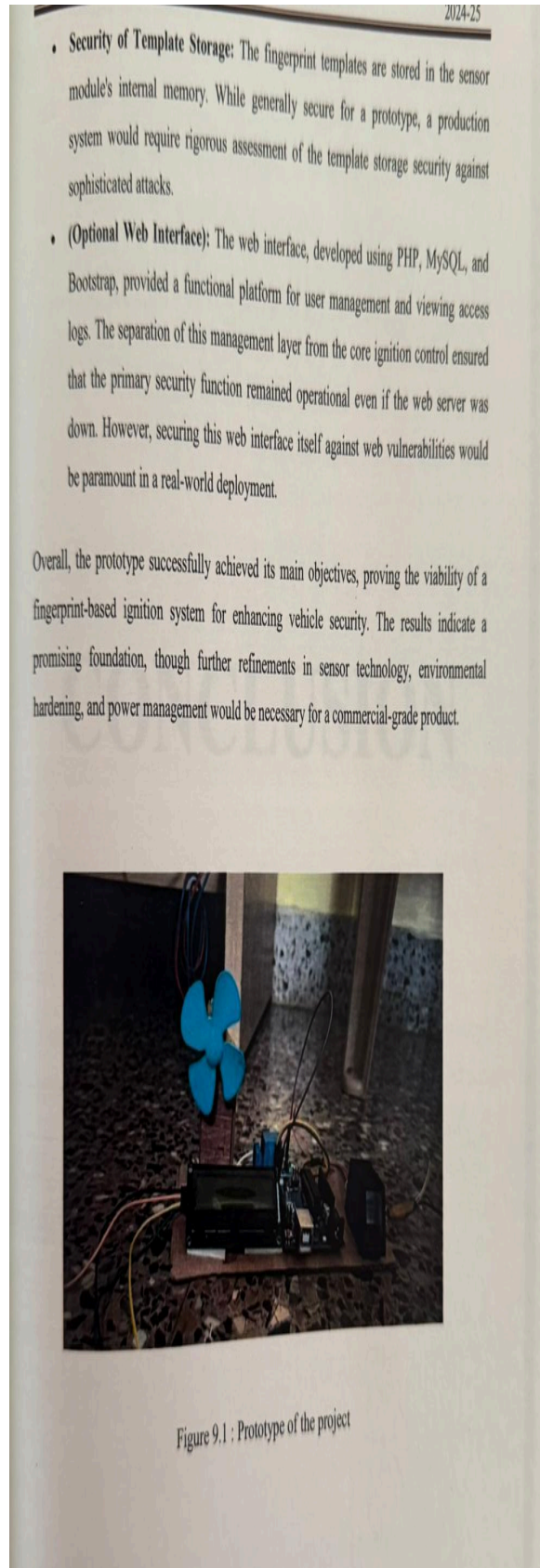


### **3. BIOMETRIC BASED CAR IGNITION**

**AIM:** The aim of the Biometric Based Car Ignition system is to enhance vehicle security using biometric authentication. The project uses fingerprint recognition to allow only authorized users to start the vehicle. It prevents unauthorized access and reduces the risk of vehicle theft. The system replaces traditional keys with a secure biometric method. Overall, the project aims to provide a reliable and advanced vehicle security solution.

### **CONCLUSION**

The Biometric Based Car Ignition system successfully improves vehicle security through biometric verification. It ensures that only authorized users can start the car engine. The system reduces the chances of theft and unauthorized usage. Biometric authentication provides higher accuracy compared to traditional keys. The project demonstrates the effective use of embedded systems and biometrics. It can be enhanced by integrating multiple biometric methods and IoT features. Thus, the system offers a smart, secure, and efficient solution for modern vehicles.



## 4) CUSTOMER CHURN ANALYSIS USING MACHINE LEARNING

**AIM:** The aim of the Customer Churn Analysis project is to predict customers who are likely to leave a business using machine learning techniques.

The system analyzes customer data such as usage patterns and service history. It helps organizations identify high-risk customers in advance.

The project supports data-driven decision-making to improve customer retention.

Overall, it aims to reduce customer loss and increase business profitability.

### CONCLUSION:

The Customer Churn Analysis Using Machine Learning project effectively predicts customer churn using trained ML models.

It helps businesses understand customer behaviour and identify key factors influencing churn.

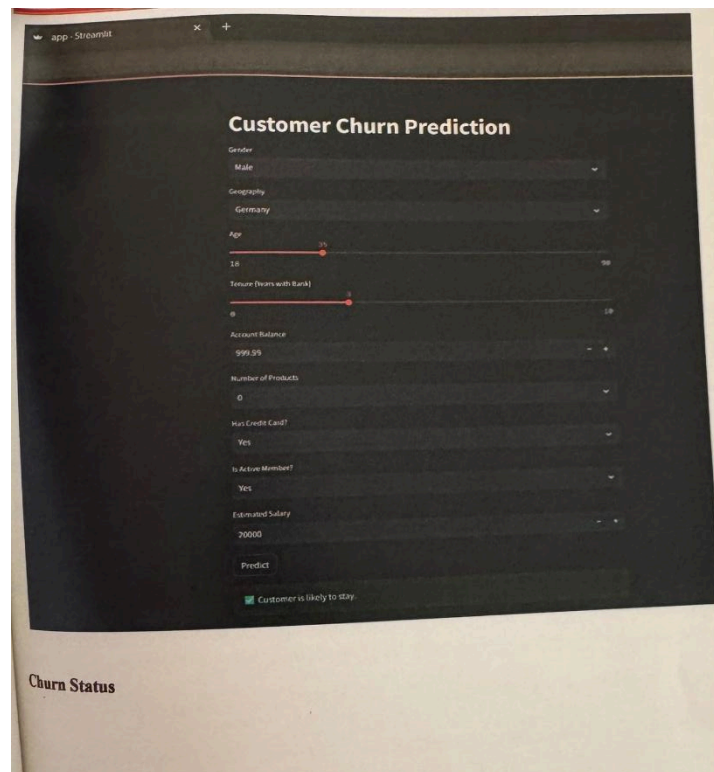
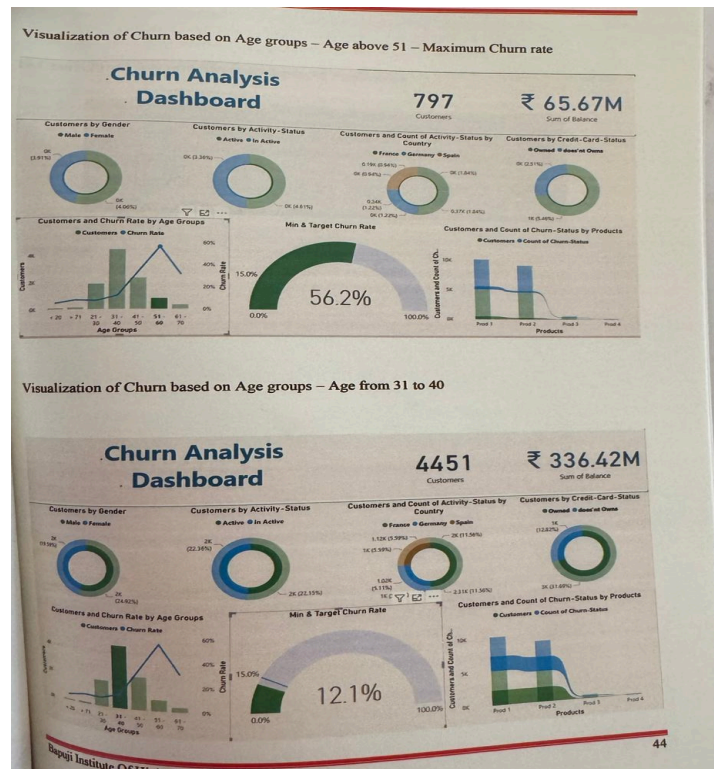
Early prediction allows companies to take preventive actions to retain customers.

The system improves marketing strategies and customer relationship management.

Machine learning models provide better accuracy compared to traditional methods.

The project can be enhanced with real-time data and advanced algorithms.

Thus, the system serves as a valuable tool for improving customer retention and business growth.



## **IOT-BASED VEHICLE EMISSION MONITORING SYSTEM**

**AIM:** The aim of the IoT-Based Vehicle Emission Monitoring System is to continuously monitor vehicle emission levels using sensors.

The system collects emission data and sends it to a cloud platform through IoT technology.

It helps in detecting vehicles that exceed permissible pollution limits.

The project supports environmental protection by reducing air pollution.

Overall, it aims to promote smart and eco-friendly transportation systems.

### **CONCLUSIONS:**

The IoT-Based Vehicle Emission Monitoring System provides an efficient solution for monitoring vehicle pollution in real time.

It enables accurate detection of harmful gas emissions using sensors.

The use of IoT allows remote monitoring and data analysis.

Authorities can take timely action against vehicles exceeding emission limits.

The system reduces manual inspection and improves transparency.

It can be enhanced by integrating GPS, mobile applications, and alert systems.

Thus, the project contributes to environmental safety and smart city development.

