

DEEN TRACKER: TECHNOLOGY-ENHANCED ISLAMIC PRACTICE MONITORING AND AI-BASED RELIGIOUS ACTIVITY TRACKER

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Abstract

The rate that digital developments have been undertaken has transformed how individuals access information related to religion, education and lifestyles. A portal that does not only contribute to spiritual development but also uses the power of technological advances to enhance the process of studying, interaction, and the frequency of prayer becomes increasingly significant even in the setting of the Islamic worship. Deen Tracker is an innovative, artificially intelligent mobile application designed to meet these needs, providing a user of any age with a plethora of features that will definitely attract their attention. This application contains Islamic education programmes such as Ghazwat Explorer, with summaries and videos; Interactive Quranic Learning; Niyyah Tracker is a Niyyah advice using Artificial Intelligence, and Islamic quizzes; and stories told by children. Deen Tracker can also be applied in Islamic upbringing and education of children through age specific instructions in dua, Salah and Wudu teachings, reading book, and through animated stories. On the same note, Hijab Cam relies on the face recognition shape and lessons to suggest the right type of hijab and there is Qibla Finder that provides the appropriate direction to pray without making use of any type of digital compass. Islamic digital calendar, prayers time module and intelligent alerts are also features of Deen Tracker to ensure a hassle-free experience of worship and life management. Deen Tracker is a combined software that contains AI personalization and learning, prayer, emotional counseling, and contemporary Muslims-friendly practices. It renders the worshipping process easy and appealing among Muslims, yet on the other hand it is an example, which demonstrates how modern technologies can be efficiently employed in the promotion of education and spirituality in the modern world.

1.1 INTRODUCTION

It has become a mandatory part of learning to have mobile applications that enhance and maintain pace with the daily activities in the hectic digital world of today. Islamic mobile applications allow Muslims to access religious information easily, conduct worship related activities and sustain

spiritual connections. Most of Islamic applications currently used on the market though, only focus on core features, i.e., schedule of prayers, the Quranic text, duas, or Qibla direction, and do not consider the individual emotional, behavioral and spiritual needs of each user. There is rarely any meaningful engagement, smart assistance, or

personalization of an application that suits a user based on his or her specific lifestyle, age, sect, beliefs, or spiritual progression. Deen Tracker is introduced as a state-of-the-art, AI-based Islamic mobile application that will seek to offer personalized spiritual guidance to every user with the objective of being able to overcome these constraints. The system has such features as an AI-based Niyyah Tracker, Digital Dhikr Analyzer, Zikr Health Score, Ghazwat Memory Explorer, Islamic Parenting and Kids Mode, Gamified Islamic Learning, and special apps such as HijabCam, which is designed specifically to cater to the behavior of a user, emotional state, and spiritual practices. Deen

Tracker aims to transform the traditional Islamic apps into smart, personalized, emotionally aware spiritual companions by combining artificial intelligence, emotional intelligence, habit tracking, and engaging Islamic learning. The fact that Islamic mobile technologies lack customization and use artificial intelligence is a significant issue[1].The project assists in relating the contemporary technology to the Islamic life by providing intelligent reminders, customized Islamic guidance, and Quranic teachings and interactive education to individuals of all ages. Its user-friendly design and AI capabilities help Muslims lead a balanced and fulfilling life.[2].

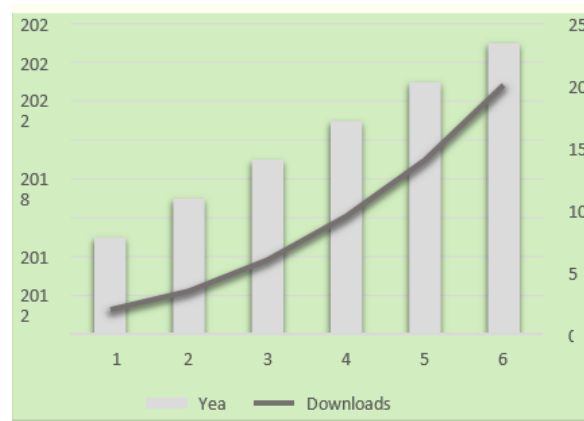


Figure 1: According to year progress

1.2 Problems / Limitations in Existing Systems

The majority of the platforms fail to address the different spiritual, educational and emotional needs of the users, although there is an increasing access to the Islamic mobile applications. The applications that are in place are not interactive and are typically generic., and do not use the

existing technology like artificial intelligence to its fullest. These limitations deter the concept of personalized learning, individual experience of development and frequent attendance of all users of every age and origin. The following subheadings can be applied to analyze the problem.

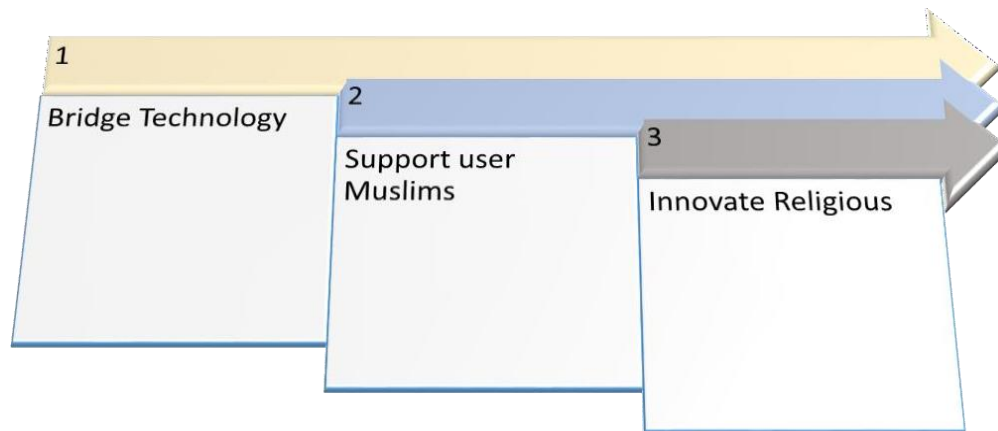


Figure 2: Problem and Limitation

- The majority of the Islamic apps do not offer personalization of their content, and thus the users are less engaged, and the content becomes boring.
- Current systems also fail to take into account emotional or spiritual conditions of users and, therefore, cannot offer context-specific advice, such as the duas or Quran verses.
- A large number of Islamic applications work with non-interactive and inactive content

which lessens. It interests particularly among children and young users.

- There is inadequate encouragement of women and children, including non-trendy fashion advice or age-adjusted Islamic educational materials.
- The absence of personalisation and interactivity also results in users being demotivated and never using the application regularly.

1.3 Motivation

The Deen Tracker App was created with the intent of creating an AI-based, personalized, Islamic mobile application that strengthens spiritual connection to users of all age groups and backgrounds and overcomes the shortcomings of existing applications. Among the key problems that have been discovered is the fact that existing Islamic apps lack personalization, and are often limited to offering generalized services, such as prayer schedule, reading the Quran, and static educational information without differentiating the needs of different users. Such applications do not take into account religious differences among the users knowledge, day to day activities, and personal practices, which lead to the lack of involvement and disconnected spiritual experience [3]. More so, much Artificial Intelligence is underutilized in Islamic applications. Although AI is employed in many

fields, its application in religious applications is still scarce. The vast majority of the platforms are not advanced, i.e. behavior-based reminders, emotion-aware guidance and adaptive learning systems are not provided. The Deen Tracker App will fill this void by integrating AI to examine the spiritual activity of users, emotional moods, and give them specific suggestions based on them [4]. The other issue of concern is the absence of interactive learning. Most Islamic apps are based on a fixed and non-interactive content that cannot ensure that users, particularly novices and younger readers remain motivated and learn. To address this, Deen Tracker provides interactive and gamified elements like quizzes, Ghazwat Explorer and a Noorani Qaida AI Qari module, which add to user engagement and facilitates effective learning [5].

1.4 Background

The mobile applications usage has radically changed the manner in which people conduct their day to day lives and this includes a wide spectrum of activities including, but not limited to, productivity and health monitoring as well as entertainment and education in the modern digital age. Among these, there are Islamic applications that have been become a very important category as it represents a rising convergence of technology and religious practice. The apps allow the user to access religious information in an easy way, such as prayer schedules, Quran recitations, collections of hadiths, libraries of duas, and education modules. They also provide reminders, progress and community interaction tools, thus allowing users to have organized spiritual practices. The growing popularity of Islamic apps may be significantly explained by the growing popularity of

smartphones, the growing access to internet services, and the need to find flexible and personalized ways of incorporating religious practice into everyday life. Moreover, the changes in the society towards the digital life, particularly in the younger generations, have boosted the use of mobile religious applications, and therefore, Islamic applications have become one of the primary means of contemporary spiritual life.

1.5 Goals and Objectives

The key objective of Deen Tracker App is to create an Islamic smart phone application that is AI-powered to provide a personalized, all-encompassing, and religiously inspiring service to Muslims across all generations. The app is trying to fill the gaps in the existing Islamic applications by providing tailored religious advice, interactive learning, and instant emotional support.

Goals

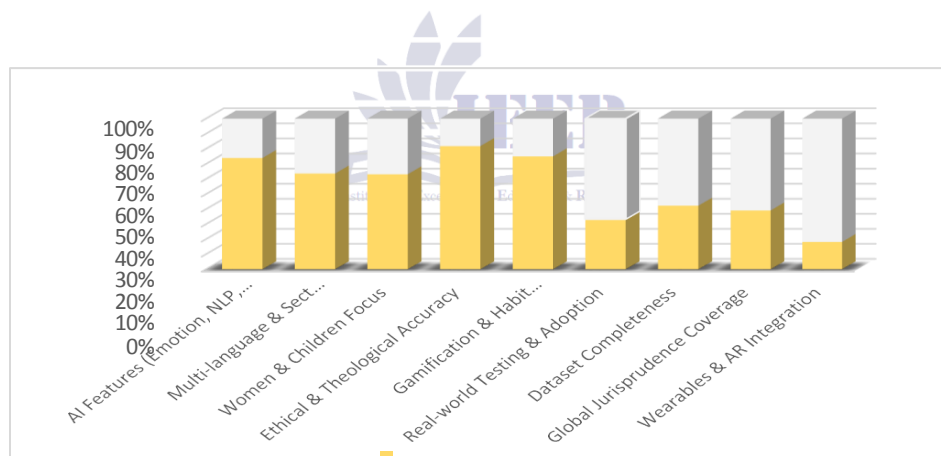


Figure 3: Modules percentage Goals

- To create gamified and interactive learning courses among children.
- To market women and home members with such features as Parenting and Kids Mode and Hijab Cam.
- To monitor behaviors, moods and academic success with the view of enhancing general spiritual well-being and participation..

Objectives

- AI-driven modules such as Parenting and Kids Mode, Niyah Tracker, Emotion Detection, HijabCam, and Norani Qaida AI Qari Module.
- Provide real-time emotional and spiritual support, as well as encourage coaching and recommendations of Quranic verses according to mood.
- Make daily reminders on dhikr, prayers, good deeds and learning activities.

- Add learning material, quizzes and online multiplayer Islamic learning to boost retention and interaction.

2.1 Literature Review

During the recent years, a broad spectrum of Islamic mobile apps has been created to help users with their everyday religious activities. The most popular apps like Muslim Pro and Quran Majeed offer the necessary functions like prayer time, Quran recitation, Qibla direction, and simple supplication. Such applications have become very popular due to their accessibility and ease of use. But the majority of these platforms are more of a static and generalized content that cannot be tailored to the preferences and behaviors of individual users, or their understanding of different religions. This usually leads to a decrease in user engagement in the long-term, and the spiritual experience in general is kept to a minimum [1].

Simultaneously, mobile learning (m-learning) has brought on board a range of interactive and adaptive learning systems to enhance user

interaction and retention of knowledge. Studies have shown that the usage of gamification, quizzes, and interactive modules can significantly improve the learning results, particularly in younger users. Even with these developments, most Islamic educational applications have not adopted such interactive methods to the fullest, but have been relying on the classical, text based teaching techniques. This gives a discrepancy between the contemporary requirement of learning with the present scenario of Islamic digital education [2]. Additionally, the use of Artificial Intelligence in mobile applications has been promising in fields like personalized recommendations, emotion recognition, and behavior analysis. The applications of AI are popular in health, education, and lifestyle applications to offer a customized user experience. Nevertheless, its use in the Islamic mobile apps is insignificant. Current solutions do not harness AI to deliver personalized spiritual support, reminders that are adaptive, or emotion-responsive support interfaces, which underscores a rich research and development opportunity in this space [3].

2.2 Existing Studies and Literature Review

Table 2 1: Compare with Research paper Institute for Excellence in Education & Research

Research Paper Title	Year	Features	Strengths	Limitations
Accessibility and Learning Outcomes of Mobile Apps to Islamic Learning: A Study [14].	2025	Islamic learning objectives and mobile app accessibility	Provides insights on usability and accessibility	Limited quality content, lack of internet literacy
Applications of Islamic Lifestyle: Addressing the Spiritual Needs of the Modern Muslims [15].	2024	Lifestyle app features, encouragement for religious practices	Identifies gaps in fulfilling spiritual needs	Lack of engagement, autonomy, and personalization
Artificial Intelligence and Current Information Technologies Uses in Islamic Sciences [16].	2024	AI integration, ML-based content processing	Detailed analysis of AI applications	Lack of AI use in education, absence of ethical standards

The Role of Artificial Intelligence in Islamic Education [17]	2025	AI-based learning, virtual assistants, personalization	Improves accessibility and learning effectiveness	Ethical concerns and risk to traditional education
Survey, Analysis and Issues of Islamic Android Apps [18]	2024	User preferences, content authentication	Highlights user needs and app issues	Content authenticity problems and misinformation

Table 2 2: Limitation of my work

Research Paper	Recommendations	How Deen Tracker Addresses Limitations
[14]	Improve UI/UX, enhance digital literacy, develop educational content	Voice-based learning, simple UI, verified Islamic content
[15]	Add community, reminders, guided content	AI-based ayat suggestions, Niyyah setting, Zikr alerts, Rooh Score
[16]	Use AI aligned with Islamic values	AI Qari, HijabCam, Emotion Detection, AI Zikr Analyzer
[17]	Maintain ethical framework, balance tech with tradition	Uses AI as assistive tool with human-verified content
[18]	Ensure content authenticity and reliability	Certified Islamic references with all-in-one platform

Table 2.3: Existing work comparative

Module Feature	Your App	Muslim Pro	Islamic Finder	Quran Majeed	Hadith Library	Ummah	Salaat First
AI-powered Niyyah Tracker	✓	✗	✗	✗	✗	✗	✗
AI-based Subconscious Zikr Notifier	✓	✗	✗	✗	✗	✗	✗
AI-based Ghazwat Memory Explorer	✓	✗	✗	✗	✗	✗	✗
Islamic Parenting & Kids Mode	✓	✗	✗	✗	✗	✗	✗
AI-powered	✓	✗	✗	✗	✗	✗	✗

2.3 Research Questions

1. To what extent are existing Islamic mobile apps effective to facilitate individual spiritual development?
2. How can AI help to monitor and improve the daily religious life?
3. Does emotional and behavioral data enhance accuracy of spiritual reminders?

4. What can AI do to provide theologically-safe and contextually-appropriate personalized recommendations?
5. How can we offer multi-sect, and culturally-sensitive content to global Muslim users?
6. What can AI-powered systems do to assist women and children with Islamic-specific content?

2.4 All Modules & Features of Deen Tracker App

Table 2 3: All Modules & Features

Module Name	Core Features in our App Deen Tracker
1. User Authentication Module	login using your email and password, Register, post a profile picture, and log out
2. Niyyat Tracker (AI-powered)	Establish daily goals (tasbih/amal), timed alerts, notifications for missed intentions, Monitoring daily consistency
3. Ghazwat Explorer	Written synopses of every Ghazwat, thorough justifications, automatically scraped YouTube videos for every conflict, and story mode for kids and adults
4. Emotion Detection Module (AI)	camera-based emotion recognition (happy/sad), examination of mood in real time, Ayats from the Quran for pleasure and grief Self-generated spiritual assistance
5. Islamic Quiz Module	100 multiple-choice questions in total; the user chooses the duration of the test (10, 20, 30, 50, etc.); the score is calculated; emphasizing the right response, A gamified educational experience
6. Parenting & Kids Mode	"How to Perform Salah" in detail, Wuzu guide, Children's Kalimas and Duas Children's short narrative videos, Islamic etiquette segment, text-based moral tales
7. HijabCam - AI Hijab Styling Module	Face shape recognition (manual selection), JSON-based hijab lesson data, automatically loaded styling videos, and suggestions for hijab styles based on facial shapes
8. Qibla Finder	Qibla direction based on location, phone angle movement recognition, real-time arrow movement, and accuracy depending on distance (near/far guiding) [10]

Deen Tracker is a special and excellent Islamic application as no other program combines these

cutting-edge capabilities into a single, coherent digital environment.

3.1 Methodology

3.1.1 Research Approach

This paper is based on an experimental and quantitative research design in determining how effective the Deen Tracker mobile application is in enhancing the daily Islamic activities of the users. The reason behind the experimental approach is

that there was a working prototype of the application that was created and tested in real users under controlled conditions within a fixed time. Quantitative method is used to quantify the behavior of the user in quantitative terms, which may include prayer amount finished, frequency of reading the Quran and the amount of tasbeeh

before and after using the application. This will enable objective appraisal of spiritual gains in clients, practices. A comparative study (pre- and

post-use) is performed to notice the effect of the application on user engagement and regularity of religious practices.

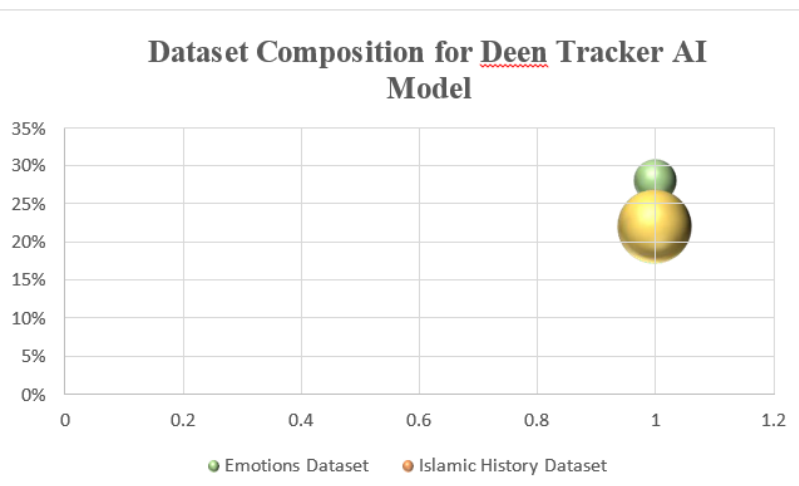


Figure 3.1: AI module detail

3.2 Interface Requirements

The interface requirements are the rules, protocols and conditions that ensure a smooth communication between the parts of the system. These are critical in the integration of AI modules, cloud services, and mobile devices in the Deen Tracker App.

3.2.1 Hardware, Interface Requirements

Mobile Device

- ✚ App designed for:
 - Android 7.0+
- ✚ Supports:
 - Multi-touch input
 - High-resolution display
- ✚ Used for:
 - App execution
 - Cloud connectivity
 - AI module processing

Sensors

- ✚ Camera:
 - Used in HijabCam AI Module
 - Used in Emotion Detection Module
 - Captures images and facial expressions
- ✚ GPS:
 - Used in Qibla Finder Module
 - Determines user location
 - Calculates prayer direction

- Sensors ensure real-time interaction between hardware and software modules

Processing Power

- ✚ Minimum requirement:
 - Dual-core processor
 - At least 2GB RAM
- ✚ Needed for:
 - AI processing
 - Emotion detection
 - Qari voice synthesis
 - Smooth app performance

Storage

- ✚ Stores:
 - User profiles
 - Activity logs
 - App settings
- ✚ Also includes:
 - Audio/video content (Quran recitation, Ghazwat, lectures)
 - Supports partial offline functionality

Development Environment

- ✚ Tools used:
 - Android Studio
 - Visual Studio Code
- ✚ Used for:
 - Coding
 - Debugging
 - Testing
 - Performance optimization

Database Interface

- ✚ **Firestore (Firestore / Realtime Database):**
 - User data storage
 - AI feedback logs
 - Activity tracking
- ✚ **SQLite:**
 - Offline data storage
 - Local caching

- ✚ Ensures:
 - Data backup
 - Synchronization
 - Data integrity

API Integration

- Google Maps API → Qibla direction
- Prayer Times API → Accurate prayer timings
- APIs provide real-time location-based Islamic services

AI Modules

- ✚ TensorFlow Lite used for:
 - Emotion Detection
 - HijabCam suggestions
 - AI Qari module
 - Optimized for mobile performance

3.3 High-Fidelity Prototype

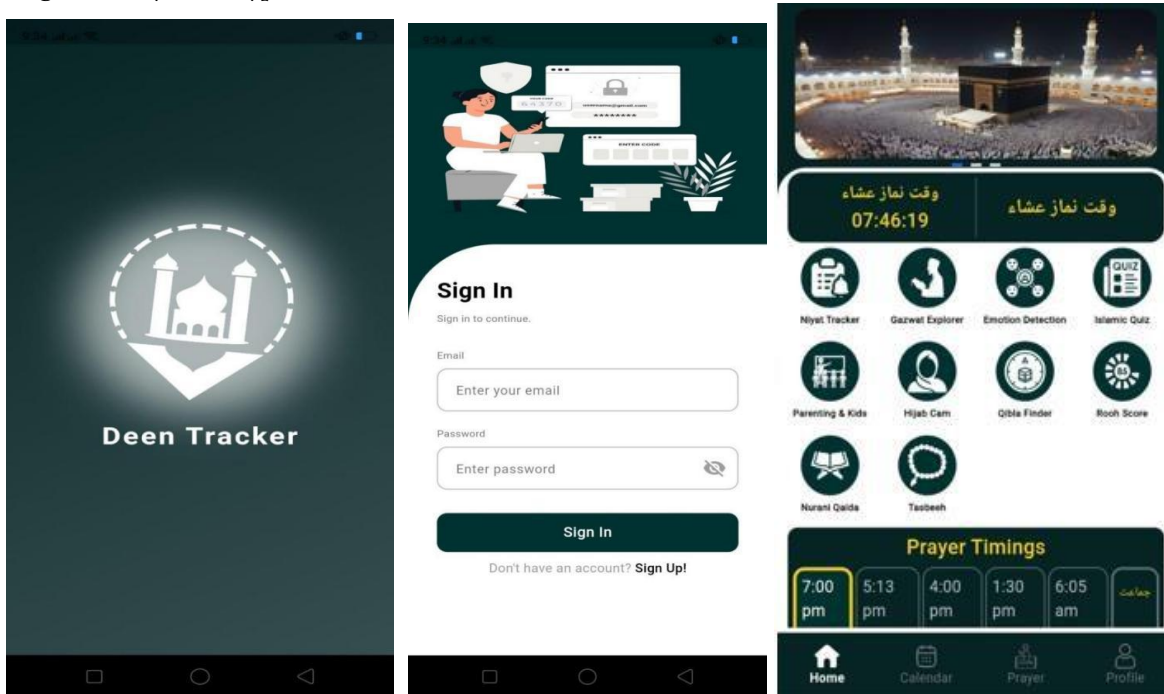


Figure 3.2: Interface

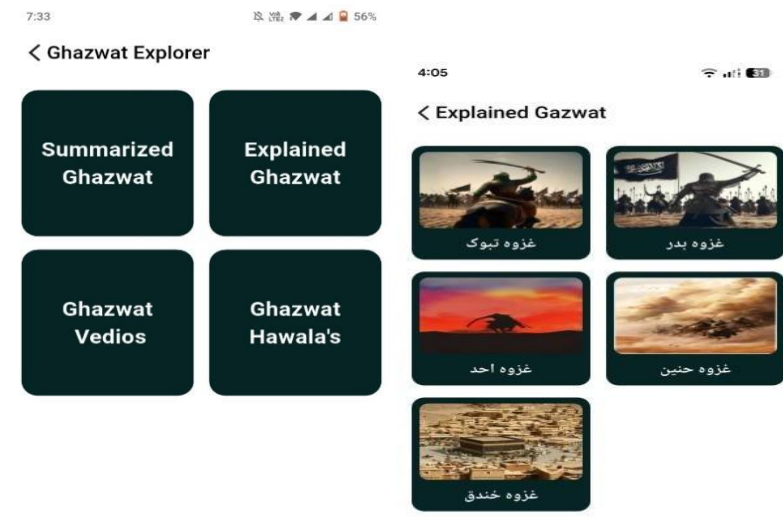


Figure 3 3: Gzwat Module



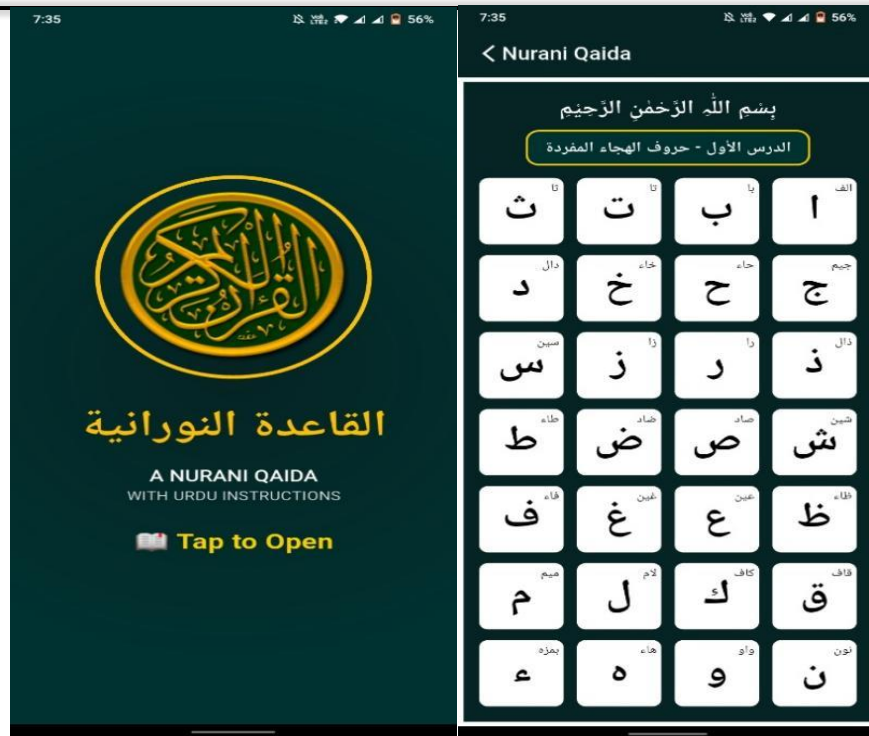


Figure 3 4: Norani Qaida Module

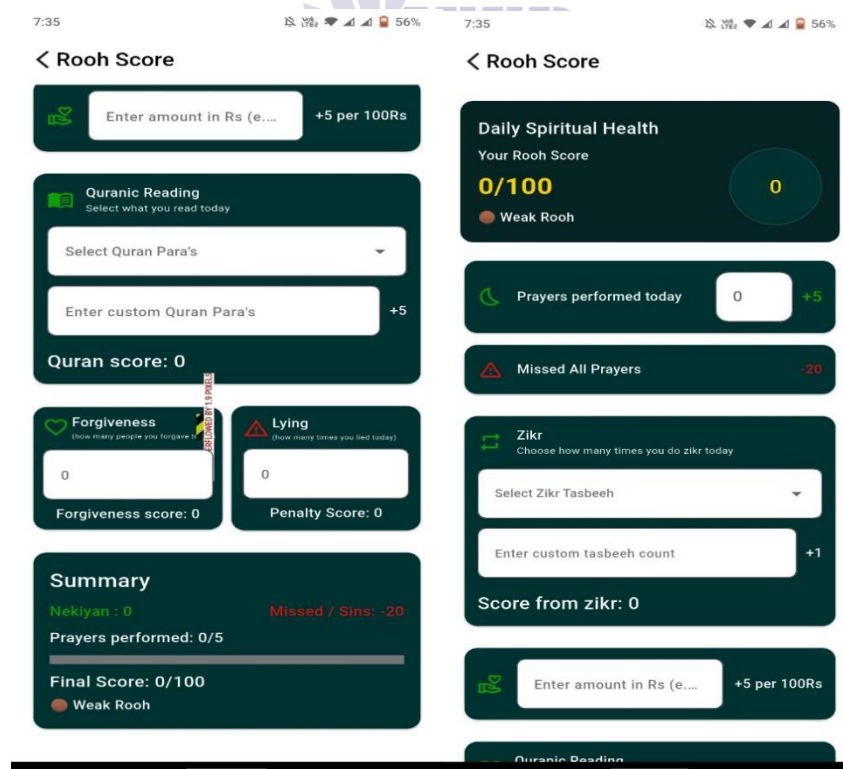


Figure 3 5: Rooh score Module

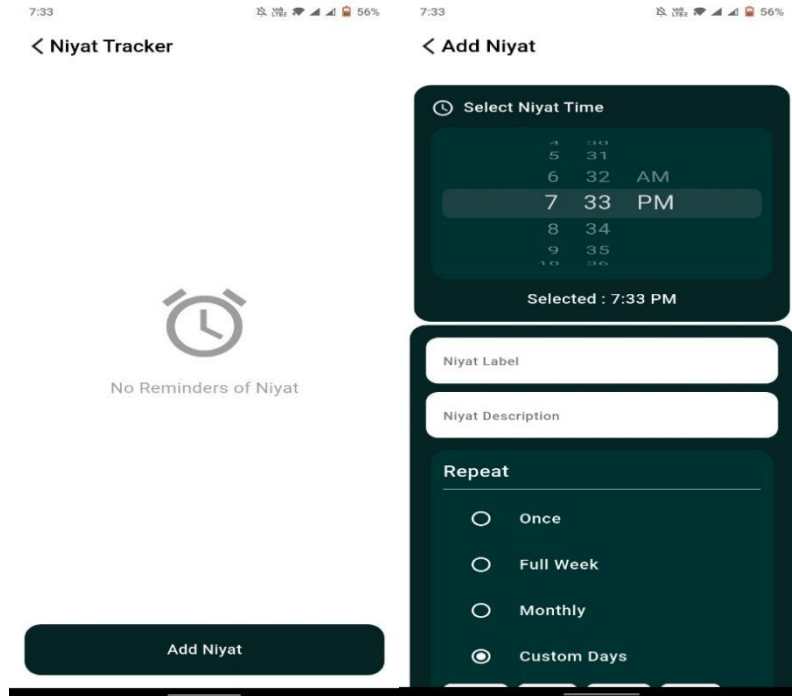


Figure 3 6: Niyat Tracker Module

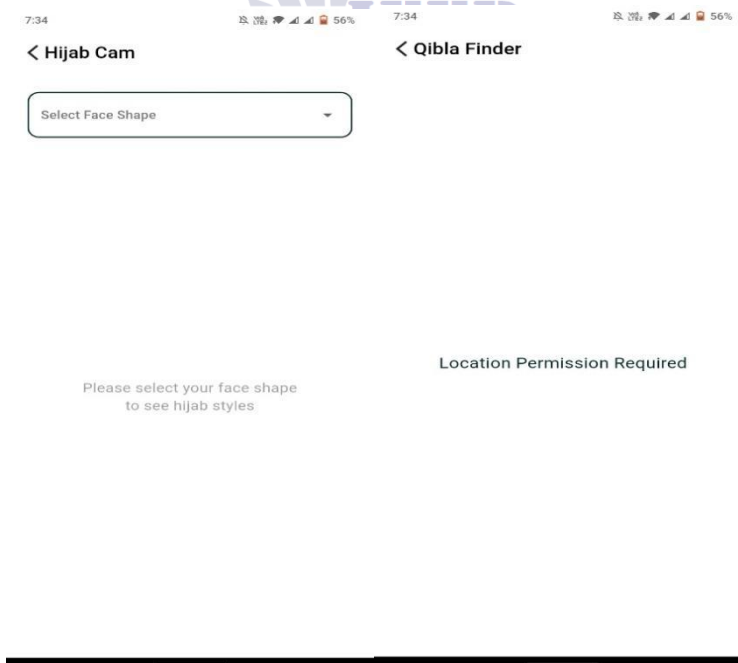


Figure 3.7: Hijab and Qibla Finder Modules

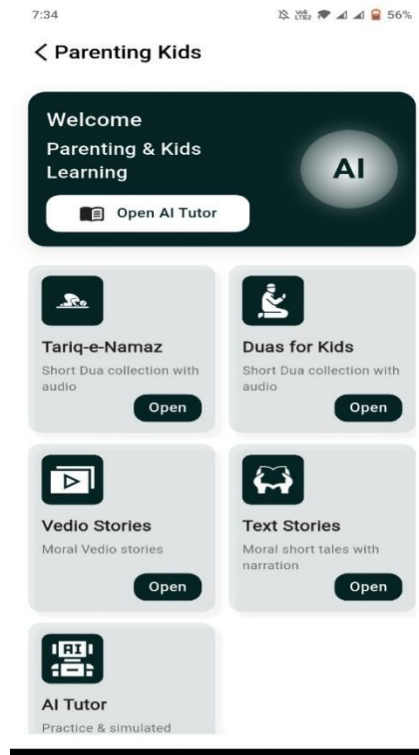
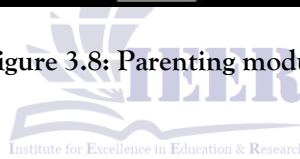


Figure 3.8: Parenting module



3.3.1 The 4+1 View Model of Architecture

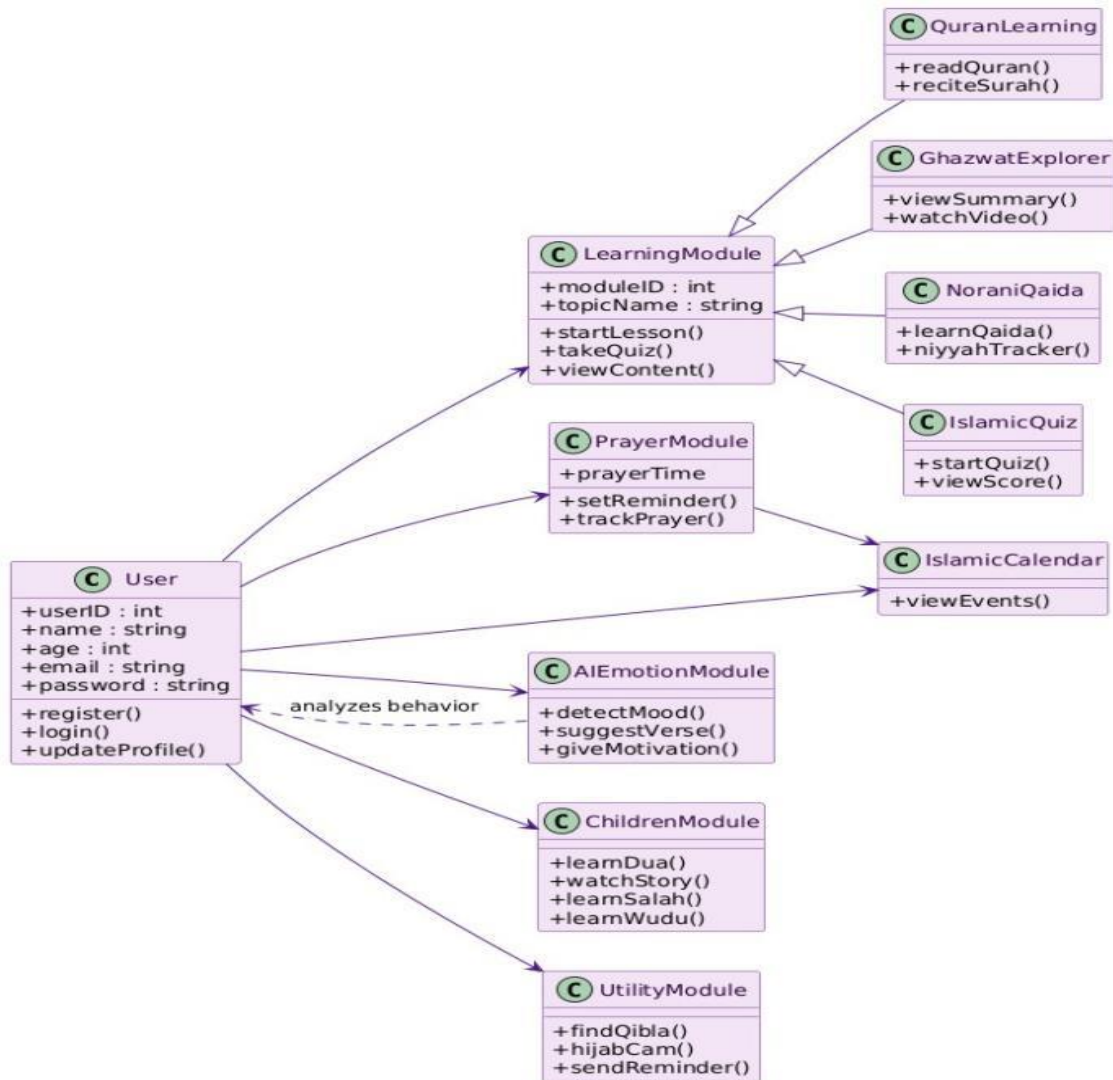


Figure 4.5: Class Diagram showing system structure and relationships

3.3.2 Process View

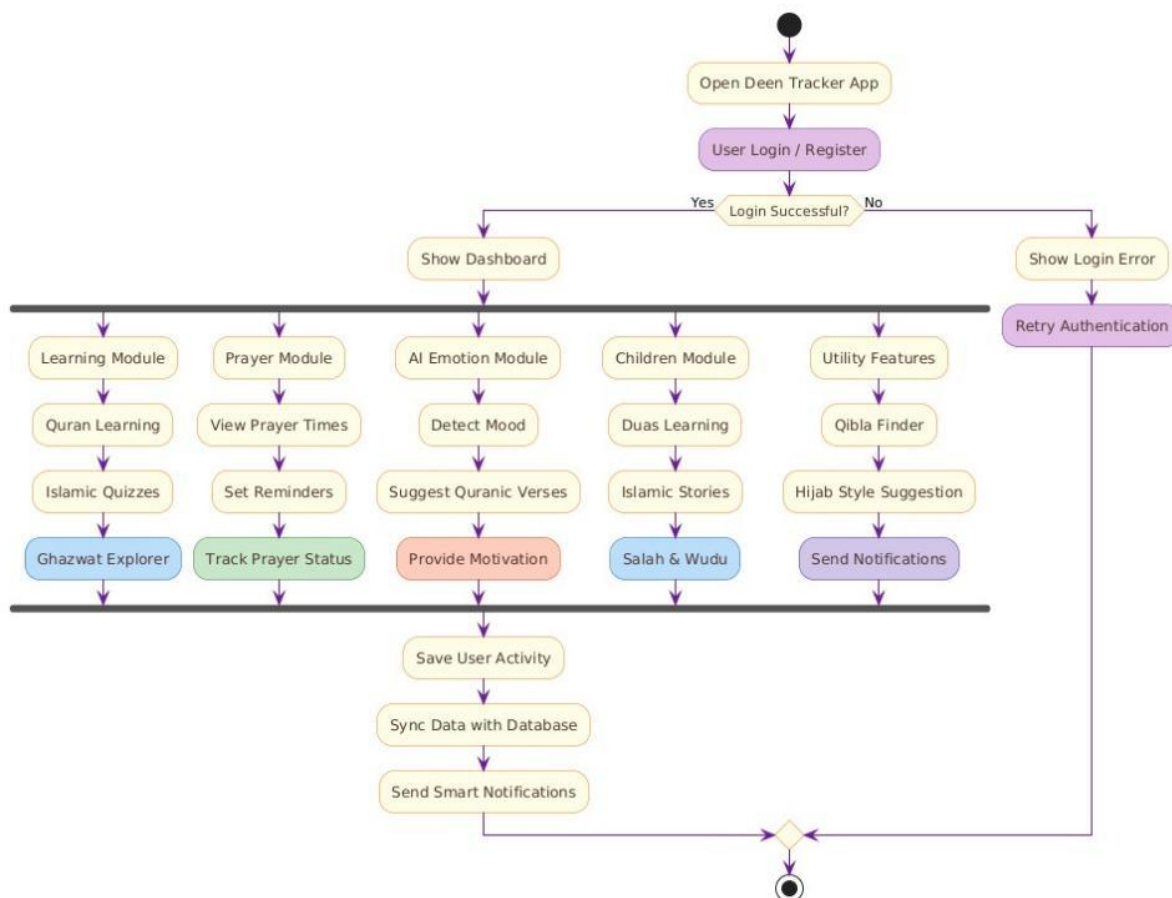


Figure 4. 6: Activity Diagram representing workflow of the system

4.1 Modules of the Deen Tracker Application

4.2.1 User Authentication Module

- Login by email and password.
- Registration (sign-up) of new users.
- Profile picture upload
- User session management
- Logout functionality

4.2.2 Niyat Tracker Module

- Setting intention (Niyah) on a daily basis (good deeds).
- Intended action reminders on a time basis.
- Missed intention alerts
- Daily consistency tracking

4.2.3 Ghazwat Explorer Module

Key Features

- Written accounts of Islamic battles.
- Explanations of Ghazwat in detail.
- Incorporation of educational video clips on YouTube.
- Story mode for children and adults.

4.2.4 Emotion Detection Module

- Camera-based facial emotion detection
- Real-time mood analysis
- Quranic verse recommendations
- Spiritual emotional support

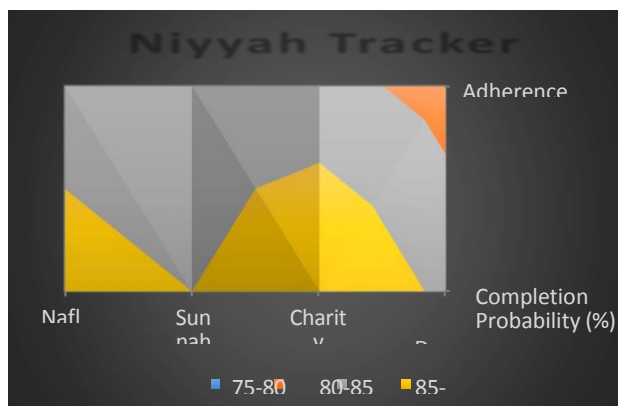


Figure 4.1: Islamic module

4.2.5 Islamic Quiz Module

- Multiple-choice Islamic questions
- Customizable quiz length
- Automatic score calculation
- Correct answer highlighting

4.2.6 Parenting and Kids Mode

- Step-by-step Namaz guide
- Wuzu learning guide
- Kalimas and Duas of children.
- Short Islamic story videos:
- Moral stories and Islamic manners.

4.2.7 HijabCam – Hijab Styling Module

- Face shape selection
- Hijab style recommendations
- Guide videos on styling.

4.2.8 Qibla Finder Module

- Location-based Qibla direction
- Real-time directional arrow
- Phone orientation detection

4.2.9 Rooh Score Module (Spiritual Fitness Meter)

- Tasbeeh tracking
- Namaz tracking
- recording good deeds
- creating spiritual scores
- inspirational messages

4.2.10 Noorani Qaida Module

- A system for learning based on lessons
- A beginner-friendly UI with audio pronunciation help

4.2.11 Tasbeeh Counter Module

With the Tasbeeh Counter feature, users are able to do tasbeeh using the program. With the help of a digital counter, Users are able to choose various verses of the Quran or tasbeeh phrases with the help of a digital counter. The system has also tasbeeh history of the user and logs on a daily basis.

4.2.12 Islamic Calendar Module

The Islamic Calendar module provides a Hijri calendar, which shows Islamic dates and significant religious events. Islamic events are displayed to the users monthly or annually. The system also alerts on the important Islamic festivals.

4.2.13 Prayer Times Module

The Prayer Times module gives the user the prayer times in his or her location daily. It will automatically compute the time of prayer and will show the schedule of today and tomorrow. It has a timer to count to the next prayer. Users may also be able to set reminder alarms to ensure that they do not miss prayers..

5.1 Module-wise Functional Testing

5.1.1 User Authentication Module

Representative Test Cases

Test ID	Scenario	Expected Outcome
TC AT 01	Enter a working email address and password.	The account was successfully created.
TC AT 02	Register using the fields that are missing	Error message displayed
TC AT 03	Enter the correct login information.	The user signed in
TC AT 04	Enter the incorrect password to log in	An error message was displayed.
TC AT 05	Log out of the system	Termination of the user session

5.1.2 Emotion Detection Module (AI-based)

Representative Test Cases

Test ID	Scenario	Input	Expected Outcome
TC ED 01	Recognize joyful feelings	Smiling face	"Happy" was found along with pertinent ayat
TC ED 02	Recognize depressing feelings	Sad expression	"Sad" identified + consoling ayat
TC ED 03	Low light levels	Poor lighting	Diminished precision but still useful
TC ED 04	No face was found	Blank frame	Error/retry message
TC ED 05	Several faces	Multiple users	The primary face is detected by the system

5.1.3 Islamic Quiz Module

Representative Test Cases

Test ID	Scenario	Input	Expected Outcome
TC IQ 01	Start the test (10 questions)	Choose ten	The test loads correctly.
TC IQ 02	Send in your responses	Take the exam.	Calculated score
TC IQ 03	All incorrect responses	Incorrect inputs	The right answers are highlighted.
TC IQ 04	Conflicting responses	Partially accurate	Accurate score

TC IQ 05	Big test (50 questions)	Choose 50	Maintaining performance
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5.1.4 Qibla Finder Module

Representative Test Cases

Test ID	Scenario	Input	Expected Outcome
TC QF 01	Find the direction of the Qibla	Location: ON	A precise direction was shown.
TC QF 02	Rotate the apparatus	Modify your orientation	Arrow is updated dynamically
TC QF 03	Not enough signal	Low GPS	Warning plus a rough direction
TC QF 04	Testing inside	weak signal	Diminished precision

5.1.5 Tasbih Counter Module

Representative Test Cases:

Test ID	Scenario	Input	Expected Outcome
TC TB 01	Increase the counter	Press the button.	The number rises
TC TB 02	Reset the counter	Press the reset button.	The counter returns to zero.
TC TB 03	Preserve Tasbih	Finish the session	Data stored
TC TB 04	Refresh the application	Restart the application	Prior data was loaded

5.1.6 Prayer Times Module

Representative Test Cases

Test ID	Scenario	Input	Expected Outcome
TC PT 01	Obtain the times of prayer	Location: ON	Precise timings are shown
TC PT 02	A countdown clock	In session	Accurate countdown
TC PT 03	Modify the location	A new city	Updated timings
TC PT 04	Mode offline	Absence of the internet	Data that has been cached

5.1.7 Parenting & Kids Mode

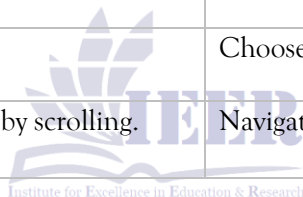
Representative Test Cases

Test ID	Scenario	Input	Expected Outcome
TC PK 01	Open the Namaz guide	Select the module.	Steps shown
TC PK 02	Play the narrative video	Press the video	It plays a video.
TC PK 03	See Dua	Choose a dua	Content shown
TC PK 04	Go through the content by scrolling.	Navigate	A fluid user interface

5.1.8 Rooh Score Module

Representative Test Cases

Test ID	Scenario	Input	Expected Outcome
TC PK 01	Open the Namaz guide	Select the module.	Steps shown
TC PK 02	Play the narrative video	Press the video	It plays a video.
TC PK 03	See Dua	Choose a dua	Content shown
TC PK 04	Go through the content by scrolling.	Navigate	A fluid user interface



6.1 Overall Conclusion

The Deen Tracker mobile application was aimed at being a multipurpose Islamic guidance tool in order to assist individuals to enhance their spiritual habits and to know more about Islam. The system is simple and convenient to all age groups since it incorporates various features. The development of a mobile application to offer

Islamic education, spiritual activity tracking and guidance in a structured and convenient way was the primary objective of the project. Several modules have been successfully created to this end, especially:

Ghazwat Explorer

- Emotion Detection
- Islamic Quiz
- Parenting & Kids Mode
- Qibla Finder
- Prayer Times

- Tasbih Counter
- Islamic Calendar
- Rooh Score
- Noorani Qaida

Each of the modules is meaningful to enhance the features of the application. But the Islamic Quiz assists the user to determine his/her knowledge. The most important aspect of the system is the Emotion Detection module since it is an artificial intelligence-based system. This module assists the user to get spiritual support and comfort by interpreting his/her emotional conditions and providing relevant Quranic verses. This makes this app different to other Islamic apps. The app consists of Rooh Score, Tasbih Counter, Niyat Tracker and others. These applications can be used to enhance uniformity in day-to-day religious activities by monitoring and compensating the activities of the users..

6.2 Achievements

The creation of the Deen Tracker application is a great milestone since it offers a total and integrated Islamic mobile solution. Compared to the old-fashioned applications, which have very few features like prayer timings or tasbeeh counting, the system provides a single platform, which integrates Islamic studies, spiritual advice, and habit monitoring all in one application.

- Effective Planning of a multi-module system.
- Efficient adoption to a unified platform of various independent modules:
 - Islamic learning modules
 - Spiritual tracking features
 - Utility-based tools
 - AI-based emotion detection

All in all, the project has managed to provide an integrated Islamic web platform, which incorporates monitoring, learning, and guidance capabilities. The Deen Tracker App is a convenient and efficient solution because it can help users to keep up with their religious lifestyle and enhance their spiritual connection since it can integrate various functionalities into one system.

6.3 Limitations of the System

The Deen Tracker application has a number of limitations in spite of its success in meeting its main goals. Among the greatest challenges is the Emotion Detection module which is presently only able to detect simple emotions like happiness and sadness. The real-life conditions that can influence its accuracy include low quality of the camera, poor lighting, and changes in facial expression. The system is not as sophisticated as more advanced systems of emotion recognition as it has a simple form of AI implementation instead of deep learning development. The other weakness is that some features require internet connectivity. The use of online data modules, including Ghazwat Explorer or content updates, might not work in regions with poor or no internet connectivity. This minimizes the overall application usability in offline settings. The app is also still restricted to Android platform limiting its usage to users of other systems like iOS or web-

based systems. This restricts the possible accessibility and uptake of the system. Moreover, the application is basic in terms of tracking and content, which is not accompanied by a high level of personalization. The system is yet to take full advantage of user behavior data in order to deliver dynamic recommendations or adaptive learning experiences, which would boost user engagement.

6.4 Future Work

Future enhancements of the Deen Tracker application aim to improve its functionality, accessibility, and user experience. The system can be upgraded by integrating advanced AI and machine learning techniques to improve emotion detection and provide more accurate personalized guidance. Cross-platform support for iOS and web can also be added to increase accessibility for a wider audience. Additionally, advanced personalization features, voice-based interaction, and accessibility options can be introduced to make the app more user-friendly for all age groups. The Islamic content database can be expanded with Tafsir, Hadith, and lectures, along with multilingual and community-based features. Overall, these improvements will make Deen Tracker a more intelligent, interactive, and comprehensive Islamic platform.

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