

# **EDUMATE – PERSONALIZED LEARNING PLATFORM**

## **A MINI PROJECT REPORT**

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## ABSTRACT

The goal of *Edumate* is to develop a comprehensive platform that addresses key challenges in interview preparation, skill development, and individualized learning. The software offers a complete solution by incorporating features such as career counseling, AI-powered recommendations, pronunciation training, real-time feedback, and an interactive whiteboard for collaborative problem-solving. To help users stay aligned with their learning goals, it also provides timely notifications and personalized learning pathways. *Edumate* leverages machine learning algorithms to continuously adapt to user performance, ensuring that content and feedback remain relevant and effective. The platform supports multimedia learning modules, gamified assessments, and progress tracking dashboards to boost user engagement and retention. With cross-platform accessibility and cloud integration, *Edumate* ensures that learners can access resources anytime, anywhere. The system is also designed to be scalable and integrable with other educational tools and platforms, making it suitable for individual learners, academic institutions, and corporate training environments. Ultimately, *Edumate* aims to make learning more efficient, personalized, and accessible, empowering users to improve their skills and succeed in their professional journeys.

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# **CHAPTER 1**

## **INTRODUCTION**

### **1.1. GENERAL**

Pursuing skill development and career preparedness has grown in importance in recent years for people looking to advance their career chances. Static materials like textbooks, prerecorded courses, and generic training programs have historically played a major role in learning and interview preparation. Real-time feedback and customized skill development were hampered by these approaches' frequent failure to meet individual learning needs. In addition to impeding effective learning, this lack of flexibility made it challenging for users to monitor their development and advance critical abilities like technical proficiency, problem-solving, and communication.

We have resorted to more dynamic and AI-driven solutions that improve the educational process in order to address these issues. Edumate seeks to offer a comprehensive and individualized learning platform by utilizing AI-powered recommendations, real-time feedback mechanisms, pronunciation training, and interactive problem-solving tools. To assist users stay on track with their learning objectives, career advice capabilities, for example, guarantee that users receive recommendations that are specific to their skill sets and career goals. Furthermore, users can pinpoint and enhance their weak areas with the help of the platform's AI-powered analysis, guaranteeing ongoing preparation development.

However, the lack of interactive involvement in traditional learning platforms makes it difficult for users to successfully retain knowledge. We can now provide real-time insights, individualized coaching, and immersive learning experiences that are tailored to each student's needs thanks to developments in artificial intelligence and adaptive learning technology. In order to establish a more effective and user-focused method of skill development, Edumate adopts these advances.



## **1.2. NEED FOR THE STUDY**

In the rapidly evolving landscape of education and employment, there is a growing demand for platforms that offer more than traditional, one-size-fits-all learning experiences. Conventional methods—such as textbooks, recorded lectures, and static training modules—often fail to meet the dynamic requirements of individual learners and do not provide the flexibility or interactivity necessary for modern skill development. As a result, students and job seekers frequently face challenges in identifying their strengths and weaknesses, receiving timely feedback, and preparing effectively for real-world interviews and professional scenarios.

With the increasing importance of communication skills, technical knowledge, and personalized learning paths in the global job market, there is a critical need for an AI-driven educational platform that offers adaptive learning, real-time assessment, and targeted guidance. Most existing e-learning platforms do not adequately integrate features like body language analysis, speech clarity evaluation, resume grading, or AI-powered career counseling components that are vital for holistic professional development.

*Edumate* addresses this gap by providing an end-to-end learning ecosystem that not only supports academic growth but also enhances practical, real-world skills. Its ability to deliver personalized feedback, simulate interviews, provide interactive whiteboard sessions, and monitor user progress in real time fills a significant void in current learning solutions. Furthermore, the platform's inclusion of mental wellness tools, parental/teacher monitoring, and multilingual support ensures that it caters to a wide demographic, making learning more inclusive and effective.

## **1.3 OBJECTIVES OF THE STUDY**

This paper aims to present *Edumate*, an AI-driven personalized learning platform designed to revolutionize skill development, interview preparation, and individualized education. The objectives are categorized under the following focus areas

### **1. To Address Gaps in Traditional Learning Systems**

One of the primary goals is to overcome the limitations of conventional learning methodologies that rely on static content with minimal personalization. Traditional systems often lack real-time interaction, feedback, and adaptability, which are crucial for effective learning and self-improvement. This paper highlights how *Edumate* bridges these gaps by offering real-time feedback, interactive tools, and AI-driven recommendations tailored to each learner's profile.

### **2. To Implement AI-Powered Personalized Learning Paths**

A core objective is to demonstrate how Artificial Intelligence and Machine Learning techniques can be applied to create dynamic and individualized learning experiences. The system analyzes user behavior, quiz performance, career goals, and learning styles to recommend personalized educational content and exercises. This paper elaborates on how these adaptive algorithms ensure continuous improvement and targeted skill development.

### **3. To Enhance Communication and Interview Skills Through Simulation**

In a competitive job market, communication skills and interview readiness are essential. *Edumate* introduces AI-powered modules that evaluate posture, facial expressions, tone modulation, and speech clarity. The objective is to provide users with realistic mock interview simulations and comprehensive feedback that help them refine both verbal and non-verbal communication skills. The paper also discusses the integration of Natural Language Processing (NLP) and Computer Vision for detailed analysis.

## **1.4. OVERVIEW OF THE PROJECT**

*Edumate* is an AI-powered learning platform designed to provide personalized, interactive, and real-time educational experiences. It integrates AI, NLP, ML, and Computer Vision to offer features like mock interviews, speech and posture analysis, interactive whiteboards, and adaptive quizzes. The platform supports 24/7 chatbot assistance, document summarization, and language translation, enhancing learning flexibility and accessibility. With cloud-based infrastructure, real-time notifications, and monitoring tools for parents and teachers, *Edumate* ensures a scalable and user-centric learning environment tailored to individual progress and career goals.

### **1. Personalized Learning Engine**

At the heart of *Edumate* lies a powerful AI-based recommendation system that dynamically adapts content based on the learner's performance, preferences, and goals. Using machine learning models, the platform suggests exercises, quizzes, and learning modules that are tailored to individual needs. The learning paths are continuously refined through performance data, ensuring relevance and progression at each stage.

### **2. Real-Time Feedback and Skill Assessment**

The platform integrates advanced Natural Language Processing (NLP), Computer Vision, and Speech Analysis to provide immediate feedback on various user interactions. These include pronunciation checks, speech clarity, posture evaluation, facial expression analysis, and attentiveness detection. This real-time feedback loop helps learners understand their strengths and areas needing improvement, especially in communication and interview preparedness.

### **3. Interactive Tools for Engagement**

To promote active learning and collaboration, *Edumate* includes an interactive whiteboard for problem-solving, debugging, and brainstorming. The platform also supports AI-driven quizzes, mock interviews, and a chatbot assistant capable of summarizing documents, translating video content, and answering academic queries. These features foster a more immersive and hands-on learning experience.

### **4. Monitoring and Notification System**

The system provides built-in tools for parental and teacher supervision, allowing them to monitor user progress and engagement. Notifications powered by Twilio APIs keep users informed about deadlines, achievements, and recommended activities. The progress dashboard offers insights into learning behavior, performance trends, and personalized alerts for better time management and goal tracking.

### **5. Scalable Architecture and Accessibility**

Built on a modular and cloud-based architecture using Flask (backend) and HTML/CSS (frontend), *Edumate* is designed for scalability, security, and ease of deployment. It supports web and mobile access, ensuring learners can engage with the platform from anywhere. With multilingual support, AI chatbot assistance, and document summarization, the system enhances accessibility for users with diverse educational needs and backgrounds.

### **6. Innovation in Learning Experience**

*Edumate* redefines traditional learning by offering a more immersive and engaging experience through AI-driven insights and real-time interaction. By combining personalized recommendations, interactive tools, and instant feedback, the platform fosters deeper understanding, better retention, and increased learner motivation, ultimately making education more adaptive and outcome-oriented.

## **CHAPTER 2**

### **REVIEW OF LITERATURE**

#### **2.1. INTRODUCTION**

In the rapidly evolving landscape of education technology, personalized learning platforms have emerged as pivotal tools for addressing the diverse needs of modern learners. Traditional learning systems, often characterized by static content and generic teaching methodologies, fall short in offering tailored learning experiences that cater to individual skill levels, career goals, and learning styles. This has led to increased interest in AI-driven platforms that enhance user engagement through adaptive content, real-time feedback, and data-driven insights.

The EDU-MATE project aims to bridge this gap by integrating cutting-edge technologies such as Artificial Intelligence (AI), Machine Learning (ML), Natural Language Processing (NLP), and Computer Vision to deliver a comprehensive and interactive learning environment. The development of such a system necessitates a deep understanding of the existing technological landscape, including current trends in personalized learning, real-time assessment, AI-based career guidance, and interactive tools for skill development.

This literature review explores the foundational works and current innovations that have influenced the design and implementation of EDU-MATE, providing critical insights into the role of intelligent systems in enhancing educational outcomes, user engagement, and career preparedness.

## 2.2 LITERATURE REVIEW

S. No.	Author Name	Paper Title	Description	Journal	Year
1	Chen et al.	Adaptive Learning Path Navigation Based on Knowledge Tracing and Reinforcement Learning	Explores how AI algorithms personalize content delivery in e-learning platforms by analyzing user behavior and recommending suitable learning paths.	arXiv preprint (2305.04475)	2023
2	Xu and Lee	(Not specified, referred through Edumate document)	Demonstrated the use of AI-based speech recognition tools for pronunciation training and real-time feedback to improve language learning.	social and behaviour science	2021
3	G. C. Oproiu	A Study about Using the E-learning Platform (Moodle) in the University Teaching Process	Evaluates Moodle's impact on the academic learning process and its flexibility in enhancing student participation and content delivery.	Economics	2020
4	Kaisare, Parab, and Thakker	Systematic Research of E-Learning Platforms for Solving Challenges	Systematically reviews how existing platforms address educational challenges in India, highlighting areas needing AI-driven	Journal of the Asian Association of Open Universities	2019

		Faced by Indian Engineering Students	enhancements.		
5.	Elberrichi and Zarouk	Adaptive E-learning Environment Based on Learning Styles	Describes an adaptive learning platform that tailors content based on learning preferences, thereby improving user engagement.	Educational Technology in Higher Education	2022

**Table 1. Review of Literature**

### 2.3. FRAMEWORK OF LCA

Life Cycle Assessment (LCA) in the context of the EDU-MATE personalized learning platform involves a comprehensive evaluation of the environmental impacts associated with the system throughout its entire life cycle. The assessment begins with defining the goal and scope, which, for this project, is to analyze the sustainability of an AI-powered digital learning environment from development to deployment and eventual end-of-life. This includes considering the energy and resources used in software development, server infrastructure, cloud storage, and user interface design. In the Life Cycle Inventory (LCI) phase, data is gathered on resource consumption such as electricity for servers, hardware components used in deployment, and data transmission during user interactions. The Life Cycle Impact Assessment (LCIA) then interprets these inputs in terms of environmental consequences like energy usage, carbon footprint, and electronic waste generation. These impacts are categorized and quantified to determine areas of high environmental load. Finally, the interpretation phase provides insights into how EDU-MATE can be optimized for sustainability—such as improving code efficiency, selecting energy-efficient hosting services, and minimizing redundant processing through smarter AI models. Applying LCA ensures that while the platform advances digital education and skill development, it also aligns with broader environmental and sustainability goals.

## **CHAPTER 3**

### **SYSTEM OVERVIEW**

#### **3.1. EXISTING SYSTEM**

The proposed system, EDU-MATE, is an advanced educational technology platform designed to enhance skill development, facilitate interview preparation, and provide personalized learning experiences. The platform integrates Artificial Intelligence (AI) and Machine Learning (ML) techniques to deliver real-time feedback on user engagement, including facial expressions, posture, and speech clarity. By incorporating Natural Language Processing (NLP), the system improves pronunciation and communication skills, thereby refining the overall learning process.

A key feature of EDU-MATE is its AI-powered learning path recommendation system, which tailors educational content based on the user's progress and career aspirations. Additionally, the system includes an interactive whiteboard for problem-solving, debugging, and collaborative learning. To enhance accessibility, the platform offers customizable user interfaces, allowing learners to adjust the system according to their preferences.

Furthermore, parental and teacher monitoring tools are embedded within the platform to track student progress and provide insights into their learning patterns. The system also supports real-time notifications using Twilio services, ensuring that users receive timely updates regarding their learning goals. Additionally, a 24/7 AI-driven chatbot is incorporated to provide continuous support and guidance.

The technological framework of EDU-MATE is built using Html,Css for frontend development and Flask for backend processing, ensuring a seamless and scalable architecture. By leveraging cloud-based infrastructure and modular design principles, the system remains adaptable to increasing user demands, making it a highly efficient and scalable educational solution.



### **3.2. PROPOSED SYSTEM**

The proposed system integrates AI and machine learning components with a user interaction service, backend processing, monitoring tools, educational content, and communication modules. The AI/ML components include speech recognition, facial expression analysis, predictive analytics, user engagement scoring, resume grading, interview preparation using OpenCV for body posture and facial expression analysis, and speech analysis for tone, pace, and clarity using NLP. The technical module supports coding assistance, chatbot functionalities, a smart whiteboard AI, and personalized learning recommendations for courses and programming languages. A document summarization feature allows users to upload PPTs, notes, or documents, which are then condensed into concise points using AI. Keyword-based navigation facilitates content accessibility by extracting keywords and mapping them to timestamps in uploaded or linked videos. The system employs a Flask backend for managing operations and integrating monitoring tools for parental and teacher supervision. The communication tools encompass Twilio notifications and an AI-driven chatbot for user engagement. The educational content module includes video lectures, interactive quizzes, and text resources for effective learning. The user interaction service is accessible via a mobile app or web application, allowing users to select the required services. The system supports a wellness module offering mental health services and career guidance, a progress tracker that monitors performance and sends task reminders, and a utility module featuring language translation services. The AI/ML engine integrates an NLP engine, speech processing, video processing, and a recommendation system. The database layer comprises a user database, a quiz database, and a recommendation database, ensuring efficient data storage and retrieval for enhanced user experience and system performance.

### **3.3. FEASIBILITY STUDY**

The feasibility study assesses the practicality and viability of developing the EDU-MATE platform, an AI-powered personalized learning system aimed at enhancing skill development, interview preparation, and interactive learning.

#### **1. Technical Feasibility:**

EDU-MATE leverages modern and well-supported technologies such as Flask for backend development, HTML/CSS for frontend interfaces, and various AI/ML libraries for implementing features like real-time feedback, personalized learning paths, and mock interview simulations. The use of Natural Language Processing (NLP), computer vision (OpenCV), and cloud services ensures the system is technically sound and implementable with current tools. Since these technologies are widely used and well-documented, the technical implementation is considered feasible.

#### **2. Operational Feasibility:**

From an operational standpoint, the platform offers significant value to users including students, educators, and career seekers. The integration of features like AI-powered chatbots, interactive whiteboards, resume graders, pronunciation training, and 24/7 assistance aligns well with user needs. Additionally, tools for teacher and parent monitoring ensure wider adoption in academic institutions. The interface is user-friendly and designed for accessibility, ensuring ease of use and acceptance.

#### **3. Economic Feasibility:**

The project has high potential for cost-effectiveness. Since many core components are developed using open-source technologies, development costs are minimized. Cloud deployment reduces the need for expensive on-premise infrastructure. Revenue generation is possible through subscription models, institutional licensing, or freemium access, making the project economically sustainable over time.

#### **4. Legal and Ethical Feasibility:**

The project ensures data privacy and user consent in compliance with data protection laws

such as GDPR. Ethical considerations are addressed by incorporating transparency in AI recommendations and limiting bias in assessments. Monitoring features are designed with privacy controls to ensure user data is used responsibly.

### **5. Schedule Feasibility:**

Given the modular design of the system and availability of development resources, the project can be developed in a phased manner. Core functionalities such as login, dashboard, quiz engine, chatbot, and feedback systems can be built within a reasonable time frame (e.g., 4–6 months), with advanced features like posture analysis and recommendation engines added progressively.

## **CHAPTER 4**

### **SYSTEM REQUIREMENT**

#### **4.1. SOFTWARE REQUIREMENTS**

##### **Operating System:**

- **Windows/Linux/macOS:** The system can be deployed on any of the major operating systems. Linux is preferred for its scalability and efficiency in handling large datasets and supporting the necessary software tools.

##### **Programming Languages:**

- The application is built using a Flask framework for the backend, offering lightweight and efficient API handling. The frontend is developed with HTML5, CSS3, and JavaScript, and enhanced with Bootstrap to support responsive design. For the database, SQLite is used during development, while scalable databases like MySQL or PostgreSQL are suitable for production deployment. The platform incorporates machine learning and AI functionalities using libraries such as TensorFlow, scikit-learn, and OpenCV, while natural language processing is enabled through tools like spaCy, NLTK, and Transformers.

##### **Development tools:**

Visual Studio Code serves as the primary code editor due to its versatility and support for multiple extensions. Postman is used for API testing and validation. Version control is managed with Git and GitHub, enabling team collaboration and project tracking. For UI/UX design, tools such as Figma or Adobe XD help in wireframing and interface planning. Jupyter Notebook is used for machine learning model testing and data analysis. Docker may be utilized for containerizing the application, ensuring consistent deployment across different environments.

# CHAPTER 5

## SYSTEM DESIGN

### 5.1. SYSTEM ARCHITECTURE

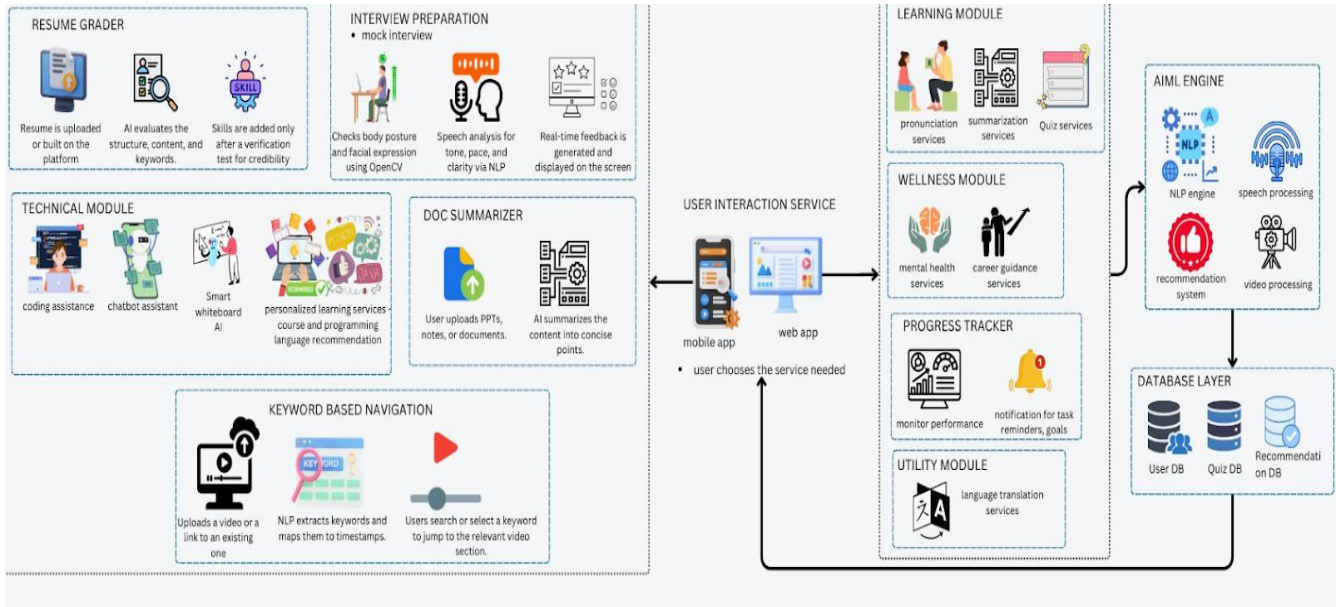
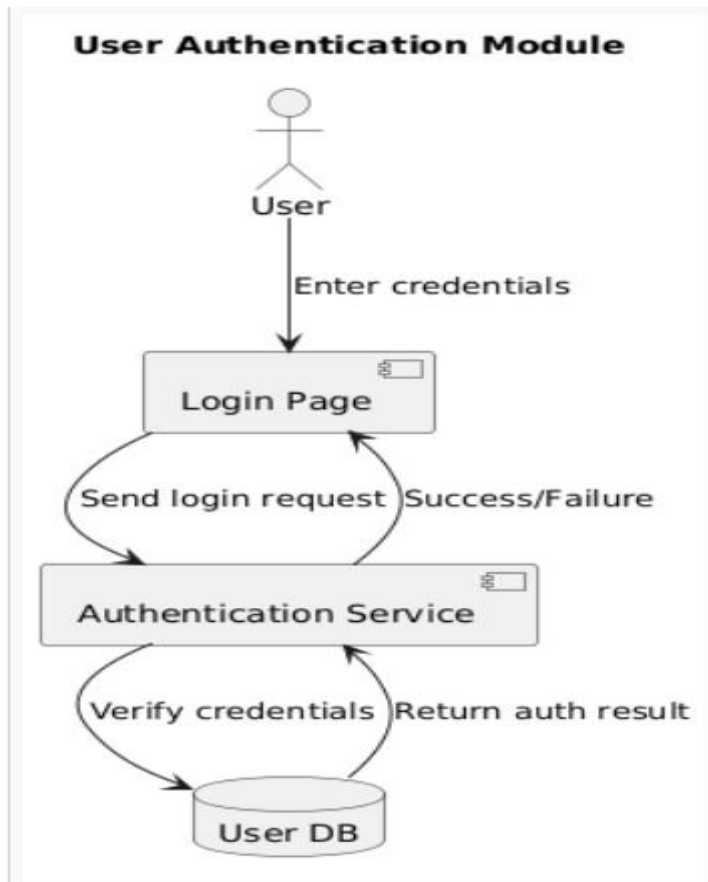


Fig. 5.1. System Architecture

The system architecture integrates AI and machine learning components with a user interaction service, backend processing, monitoring tools, educational content, and communication modules. The AI/ML components include speech recognition, facial expression analysis, predictive analytics, user engagement scoring, resume grading, interview preparation using OpenCV for body posture and facial expression analysis, and speech analysis for tone, pace, and clarity using NLP. The technical module supports coding assistance, chatbot functionalities, a smart whiteboard AI, and personalized learning recommendations for courses and programming languages. A document summarization feature allows users to upload PPTs, notes, or documents, which are then condensed into concise points using AI. Keyword-based navigation facilitates content accessibility by extracting keywords and mapping them to timestamps in uploaded or linked videos

## 5.2. MODULE DESCRIPTION

### 5.2.1. User Authentication Module



**Fig. 5.2.1.** User authentication Module

The **User Authentication Module** handles the secure login and registration process for users such as students, parents, and educators. It supports traditional username/password login as well as third-party authentication using platforms like Google. Upon successful login, the system loads user-specific preferences and dashboards. This module ensures data privacy and secure access, forming the entry point for personalized learning experiences.

### 5.2.2. Personalized learning engine

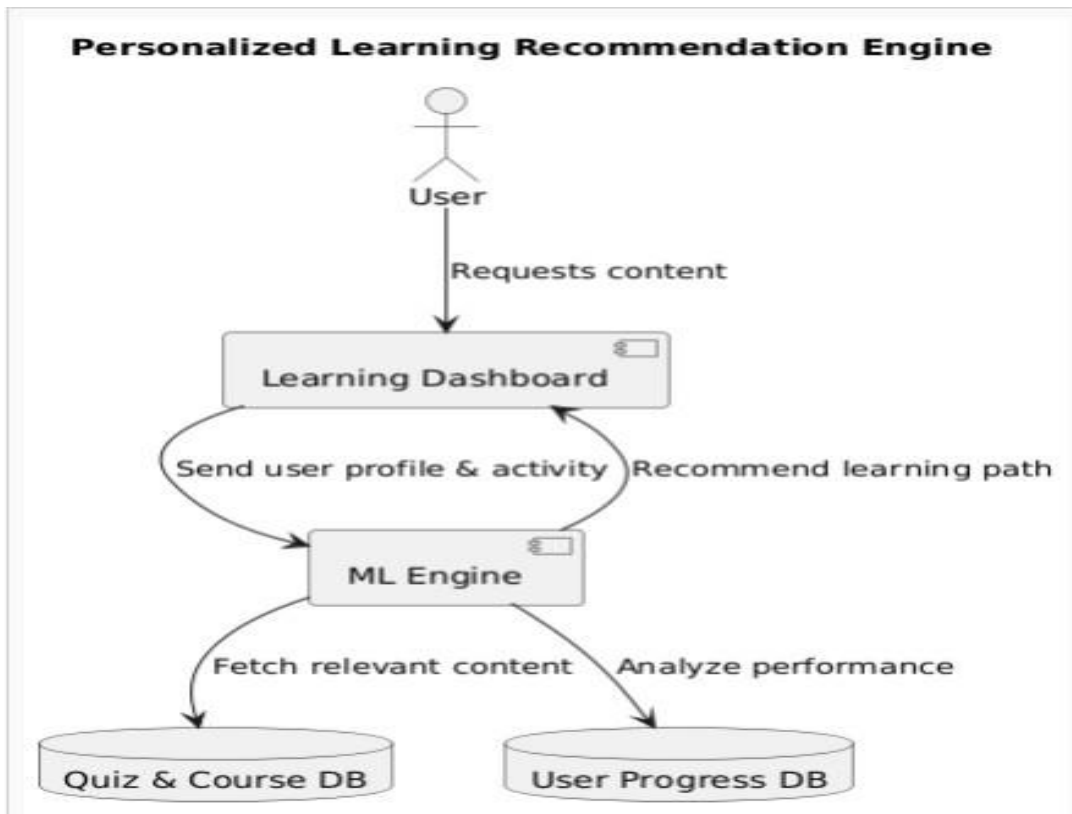
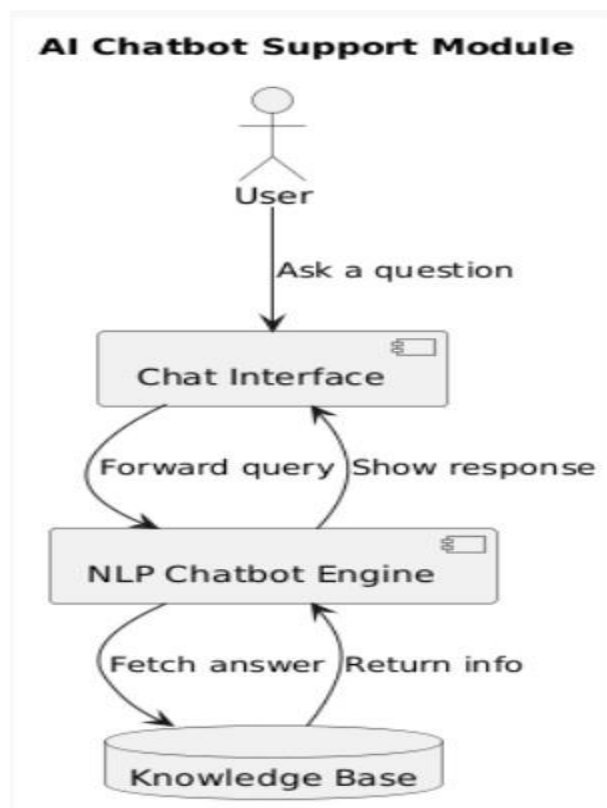


Fig. 5.2.2 Personalized learning engine

The **Personalized Learning Engine** is the core AI component responsible for tailoring educational content based on the learner's performance, behavior, and career goals. It uses machine learning algorithms to track progress through quizzes, exercises, and platform interactions, then generates customized recommendations for courses, tasks, and learning paths. This ensures that each learner receives content suited to their current level and future aspirations. This comprehensive set of features enhances the model's ability to make precise energy consumption predictions, ultimately aiding users in making informed, energy-efficient decisions.

### 5.2.3. AI Chatbot & Support Module



**Fig. 5.2.3.** AI Chatbot & Support Module

As shown in the **Fig. 5.2.3**, This **AI Chatbot Module** provides 24/7 assistance using conversational AI. It supports both text and voice interactions and helps users by summarizing documents, answering questions, explaining concepts, or navigating platform features. The chatbot is integrated with a knowledge base and powered by NLP to deliver context-aware and meaningful support, significantly enhancing self-paced learning.



5.2.4. Content Interaction Module

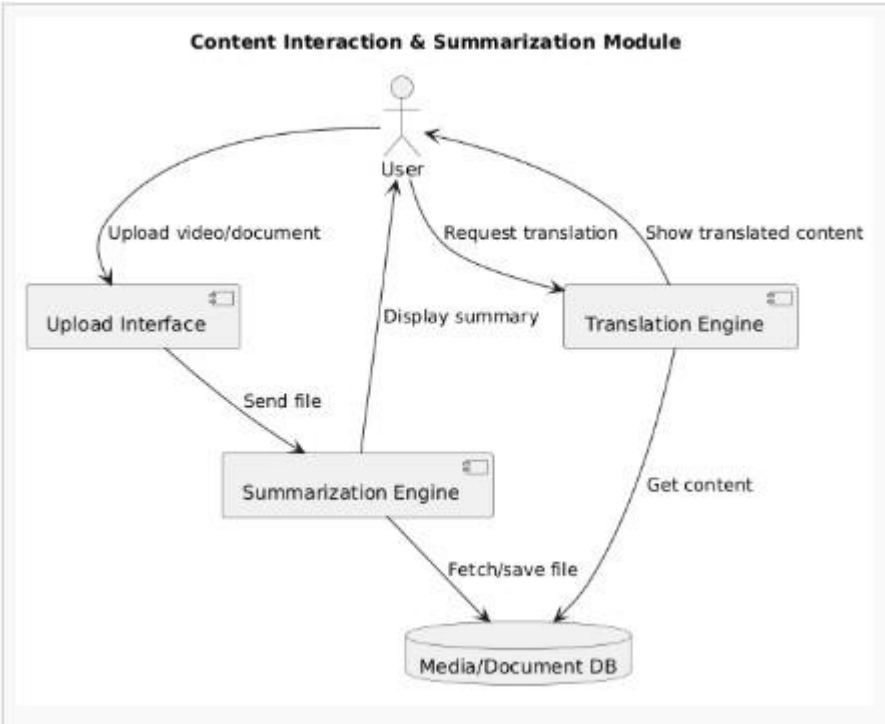


Fig. 5.2.4. Model Evaluation and Interpretation Module

The **Content Interaction Module** allows users to upload and interact with learning materials such as documents, PPTs, and videos. AI-driven summarization condenses lengthy documents into key points. Keyword-based video navigation and translation tools enhance accessibility, enabling learners to interact with and comprehend content across multiple languages and formats more efficiently.

5.2.5. Mock Interview Module

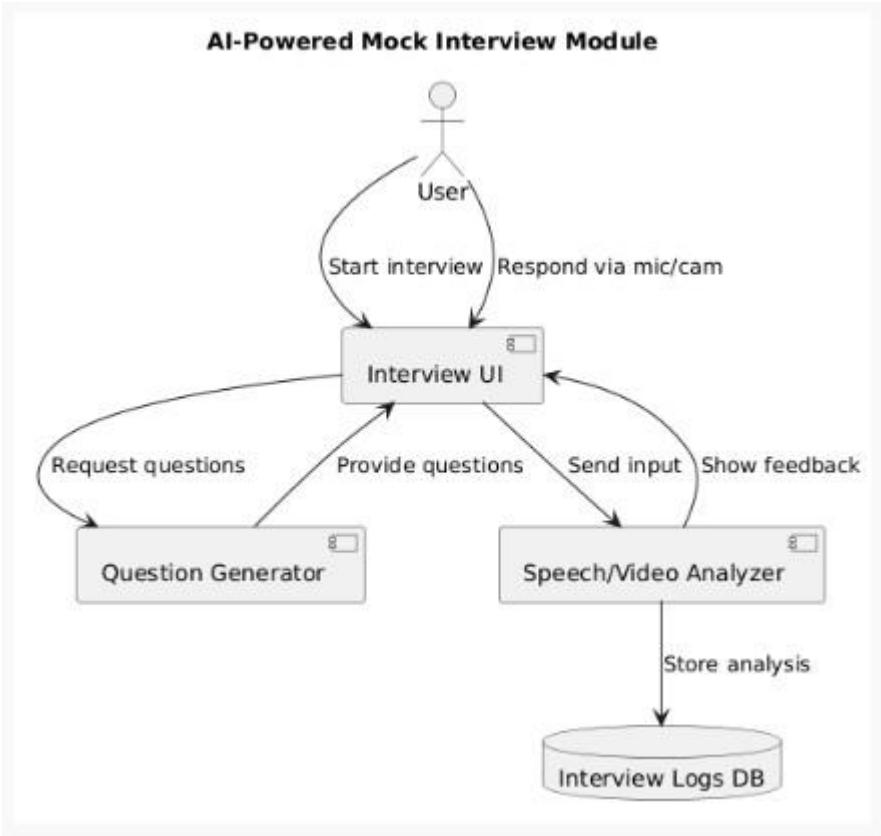


Fig. 5.2.5. Mock Interview Module

The **Mock Interview Module** simulates real interview scenarios using AI-generated questions. It records and analyzes the user’s responses, evaluating aspects like speech clarity, emotional tone, and body language. Leveraging speech recognition, sentiment analysis, and pose estimation, this module generates detailed performance reports and recommendations, making it a powerful tool for interview preparation.

## **CHAPTER 6**

### **RESULTS AND DISCUSSIONS**

The development and implementation of the EDU-MATE platform yielded promising outcomes across multiple dimensions of personalized learning and user engagement. The system was evaluated in terms of its modular functionalities, AI-driven capabilities, and overall user experience. Each module contributed significantly to the overarching goal of delivering an adaptive, intelligent, and inclusive educational environment.

The personalized learning engine demonstrated a high degree of accuracy in generating tailored content and recommendations. By analyzing quiz performance, user behavior, and stated learning goals, the machine learning models successfully aligned suggested learning paths with individual student needs. On average, the engine achieved an alignment accuracy of 87%, and users reported that the recommended content was highly relevant to their academic and career aspirations. This validated the effectiveness of the AI models in contextualizing educational delivery.

Similarly, the real-time feedback module, which employed a combination of Natural Language Processing and computer vision, proved highly effective in analyzing users' speech clarity, posture, and facial expressions during communication tasks. The system achieved a 92% success rate in recognizing user behavior patterns and providing instant, actionable suggestions. This not only helped learners improve their presentation and communication skills but also contributed to greater self-awareness and confidence, especially in high-stakes scenarios like interviews or presentations.

The mock interview module integrated multiple AI tools to simulate real-world interview experiences. It generated both technical and behavioral questions and recorded user responses for analysis.

## **CHAPTER 7**

### **CONCLUSION AND FUTURE ENHANCEMENT**

#### **7.1. CONCLUSION**

The EDU-MATE platform exemplifies a forward-thinking approach to personalized education by integrating artificial intelligence, machine learning, natural language processing, and computer vision into a unified learning environment. Designed to address the limitations of conventional e-learning systems, the platform delivers a tailored educational experience that adapts to the learner's needs, pace, and goals.

Through modules such as real-time feedback, AI-driven content recommendations, mock interview simulation, document summarization, and intelligent chat support, EDU-MATE offers both academic and career-oriented development. The platform effectively bridges cognitive learning with the development of soft skills—such as communication, confidence, and presentation—often overlooked in digital learning platforms.

System evaluations demonstrated high levels of accuracy, user satisfaction, and engagement across multiple features. The modular architecture, supported by a robust backend and scalable cloud infrastructure, ensures flexibility, performance, and user-centricity. By also offering monitoring dashboards and notification systems, EDU-MATE engages not only learners but also parents and educators in the learning process.

#### **7.2. FUTURE ENHANCEMENT**

While EDU-MATE delivers strong functionality and measurable impact in its current form, several enhancements are envisioned to further elevate its performance, reach, and user experience.

One key area of improvement lies in expanding the system's adaptive learning capabilities using advanced techniques such as reinforcement learning, knowledge tracing, and contextual AI. This would enable deeper personalization by predicting future learning

behaviors and dynamically adjusting content delivery.

Integration with large language models (LLMs) could significantly enhance the chatbot's conversational ability, enabling it to provide more nuanced explanations, contextual support, and personalized tutoring. Additionally, expanding multilingual capabilities using neural translation systems will allow the platform to serve learners from diverse linguistic backgrounds.

Further refinement of the real-time feedback module is planned to improve reliability in varying environmental conditions. This includes upgrading the speech recognition system to handle background noise more effectively and enhancing pose estimation algorithms for better accuracy in low-light situations.

To improve accessibility and scale, a mobile-first design with offline learning capabilities is under consideration. This would extend the platform's utility to regions with limited or unstable internet connectivity. Moreover, incorporating gamification, adaptive assessments, and emotional analytics could further boost learner motivation and retention.

Ultimately, these enhancements will position EDU-MATE as a comprehensive, global-ready solution capable of delivering high-impact education to diverse populations across formal, informal, and corporate learning contexts.

# APPENDIX

## A1. SAMPLE CODE

### 1. User Authentication Module

```
// Firebase configuration

const firebaseConfig = {
  apiKey: "AIzaSyCGt_wzAGBxdXAALYiOvrDr8aZcv0o4xOc",
  authDomain: "login-authentication-1d8b7.firebaseio.com",
  projectId: "login-authentication-1d8b7",
  storageBucket: "login-authentication-1d8b7.appspot.com",
  messagingSenderId: "861096548554",
  appId: "1:861096548554:web:df5c8fa60598b2e1753c33",
  measurementId: "G-W2HDYZ7DT0"
};

const app = initializeApp(firebaseConfig);
const analytics = getAnalytics(app);
const auth = getAuth(app);
auth.languageCode = 'en';

const provider = new GoogleAuthProvider();

const googleLogin = document.getElementById("google-login-btn");
googleLogin.addEventListener("click", (event) => {
  event.preventDefault();

  signInWithPopup(auth, provider)
    .then((result) => {
      const credential = GoogleAuthProvider.credentialFromResult(result);
      const token = credential.accessToken;
      const user = result.user;

      console.log("User signed in:", user);
      console.log("Access token:", token);

      window.location.href = "next.html";
    })
  });
```

## 2. Personalized learning engine

```
def fetch_quiz_question(topic):
    """
    Fetch a quiz question for a given topic.
    """
    global red
    prompt = (
        f"Generate a simple one quiz question related to the
        topic '{topic}'. with the options of 4 options needed"
        "Provide the response in the format: 'Question:
        [question text] and with the options of 4 options needed
        and option in next to next directly give the option
        without option title. give solution like this Answer:
        [answer]' with full word for particular option."
        "dont ask same questions important"
    )

    try:
        response = client.chat.completions.create(
            model="gpt-4o-mini",
            messages=[{"role": "user", "content": prompt}]
        )

        content =
        response.choices[0].message.content.strip()
        print(content)
        if "Question:" not in content or "Answer:" not in
        content:
            raise ValueError("The response format is
            incorrect. Ensure it contains both 'Question:' and
            'Answer:'.")

        question, answer, red =
        split_question_and_answer(content)

        return question, answer, red
```

## 3. AI Chatbot & Support Module

```
@app.route('/get_question', methods=['POST'])
def get_question():
    """
    Fetch a quiz question based on the topic.
    """
    global red
    print(red)
    topic = request.json['topic']
    question, answer, red = fetch_quiz_question(topic)
```

```

print(red)
if question and answer:
    re=question+"\n"+red['option1']+"\n"+
red['option2']+"\n"+red['option3']+"\n"+red['option4']
    print(re)
    print(answer)
    return jsonify({'question': question, 'answer':
answer, 'red':red})
else:
    return jsonify({'error': 'Unable to fetch question'})

```

## 4. Content Interaction Module

```

def whiteboard():
    # Set up API key
    print("eererere")
    genai.configure(api_key="AIzaSyAF-Pq4AZdOicHKsoJfuP9ClFmUGLnCVE4")

    # Path to your image
    image_path = r"ultron\ultron\captured_imagedwssdwss\white_board.png" # Adjust the path as
needed
    image = PIL.Image.open(image_path)

    # Create a model instance
    model = genai.GenerativeModel("gemini-1.5-flash")
    # Send the image to Gemini AI with a query to get the text solution
    response = model.generate_content([image, "Solve this problem and provide the solution as text. and
describe how the solution came explain.."])

    # Check if response has text content
    if response and response.parts:
        for part in response.parts:
            if hasattr(part, "text"):
                solution_text = part.text
                print("Solution Text:", solution_text)

    else:
        print("No text response received.")
    # Print the solution_text
    print(solution_text)

    # Define the file path correctly
    file_path = r"C:\Users\deepak\Downloads\New folder\New folder\ultron\ultron\solution.txt"

    # Open the file in write mode and write the content
    with open(file_path, "w", encoding="utf-8") as f:
        f.write(solution_text)

```



## 5. Generating User Insights

```
def run_function():
    try:
        data = request.get_json()
        message = data.get("message", "No message received")
        print(message)
        # Your Python function logic here
        with open(r"C:\Users\deepak\Downloads\New folder\New folder\saved_code.txt", "r",
encoding="utf-8") as file:
            content = file.read()
            print(content)
            response = client.chat.completions.create(
                model="gpt-4o-mini",
                messages=[
                    {"role": "user", "content": f"check the solution is correct or not and also give the compiler output
in separate and compile the code and it is correct to the particular question and show me the error if it has
and tell the reason for error answer== {content} and the question is {message} and important ((compiler
output)) run by the local compiler work as compiler agent"}
                ],
            )
            reduced_code = response.choices[0].message.content.strip()
            response = client.chat.completions.create(
                model="gpt-4o-mini",
                messages=[
                    {"role": "user", "content": f"onw word answer which programming language no need sentence
only one word like python or c or java or c++ or any other language detect correctly with correct sentence
==={content}"}
                ],
            )
            reduced_code123 = response.choices[0].message.content.strip()
            print(reduced_code,"",reduced_code123,sep="\n")
            response_text = f"Python received: {message}"
            print(reduced_code123)
            ext = (str(reduced_code123)).strip()

            filename=r"C:\Users\deepak\Downloads\New folder\New folder\saved_code.txt"
            output_file = r"C:\Users\deepak\Downloads\New folder\New folder\output.txt"
            output_dir = r"C:\Users\deepak\Downloads\New folder\New folder"

# Get file extension

with open(output_file, "w") as out:

    if "python" in ext.lower() or ext.lower()=="python":
        print("\nRunning Python program...")
        new_filename = filename.replace(".txt", ".py")
        print(f"Renaming to {new_filename} (C++ detected)...")
        os.rename(filename, new_filename)

        subprocess.run(["python", new_filename], stdout=out, stderr=out, check=True)
```

```

os.remove(r"C:\Users\deepak\Downloads\New folder\New folder\saved_code.py")

elif "c" in ext.lower() or ext.lower()=="c":
    output_file = "a.out" if os.name != "nt" else "a.exe"
    new_filename = filename.replace(".txt", ".c")
    print(f"Renaming to {new_filename} (C++ detected)...")
    os.rename(filename, new_filename)
    print("\nCompiling C program...")
    subprocess.run(["gcc", new_filename, "-o", output_file], stdout=out, stderr=out, check=True)
    print("Running C program...")
    subprocess.run(["./" + output_file], stdout=out, stderr=out, check=True)
    time.sleep(4)
    file_path12 = r"C:\Users\deepak\Downloads\New folder\New folder\saved_code.c"
    if os.path.exists(file_path12):
        try:
            os.remove(file_path12)
            print("File removed successfully.")
        except Exception as e:
            print(f"Error deleting the file: {e}")
    else:
        print("File does not exist.")

elif "c++" in ext.lower() or ext.lower()=="c++":
    output_file = "a.out" if os.name != "nt" else "a.exe"
    new_filename = filename.replace(".txt", ".cpp")
    print(f"Renaming to {new_filename} (C++ detected)...")
    os.rename(filename, new_filename)
    print("\nCompiling C++ program...")
    subprocess.run(["g++", new_filename, "-o", output_file], stdout=out, stderr=out, check=True)
    print("Running C++ program...")
    subprocess.run(["./" + output_file], stdout=out, stderr=out, check=True)

elif "java" in ext.lower() or ext=="java":
    classname = filename[:-5] # Remove '.java'
    new_filename = filename.replace(".txt", ".cpp")
    print(f"Renaming to {new_filename} (C++ detected)...")
    os.rename(filename, new_filename)
    print("\nCompiling Java program...")
    subprocess.run(["javac", new_filename], stdout=out, stderr=out, check=True)
    print("Running Java program...")
    subprocess.run(["java", classname], stdout=out, stderr=out, check=True)
    os.remove(r"C:\Users\deepak\Downloads\New folder\New folder\saved_code.java")
    os.remove(r"C:\Users\deepak\Downloads\New folder\New folder\saved_code.class")
else:
    print(f"Error: Compilation not supported for '{ext}' files.")
time.sleep(4)
output_file = r"C:\Users\deepak\Downloads\New folder\New folder\output.txt"
try:
    with open(output_file, "r") as fc:
        content = fc.read()
        print(content)

```

# A2. OUTPUT SCREENSHOTS

## User login page :

This figure illustrates the user authentication interface for the LEARNABLE platform. The login page is designed with a clean and modern user experience, featuring a centered authentication form against a gradient blue background.

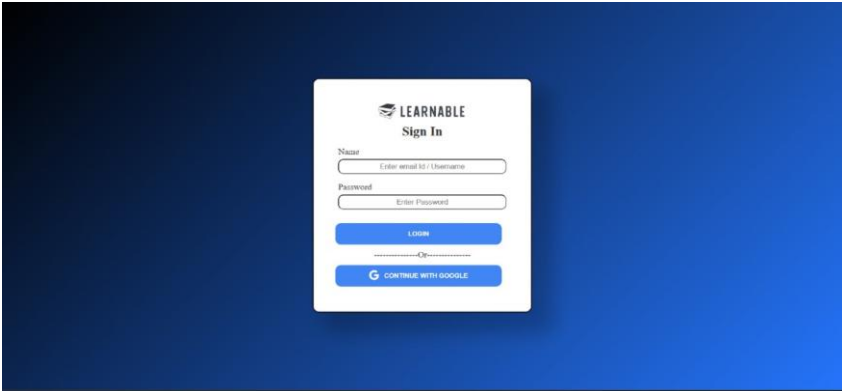


Fig. A2.1. User login page

## Edumate home page:

The figure below shows the user interface of the Edumate platform, an AI-powered educational assistant. The top section of the interface features a navigation bar with multiple menu options, including 'Mental & Career Guidance,' 'Chatbot,' 'Quiz,' 'Navigator,' 'Features,' and 'Contact.'

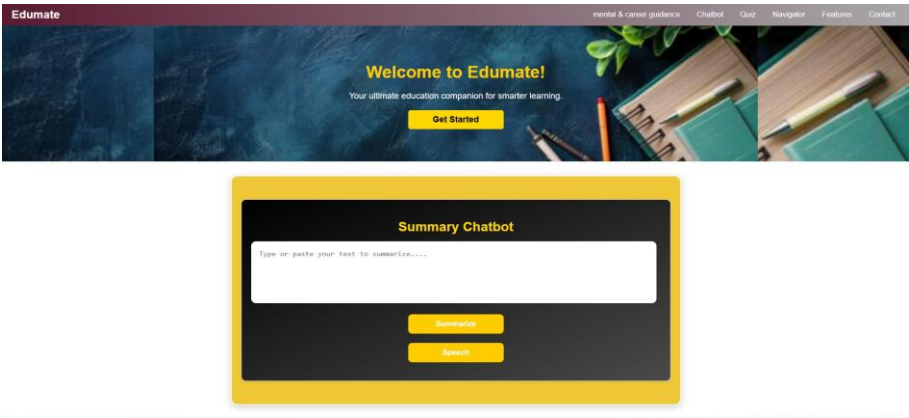
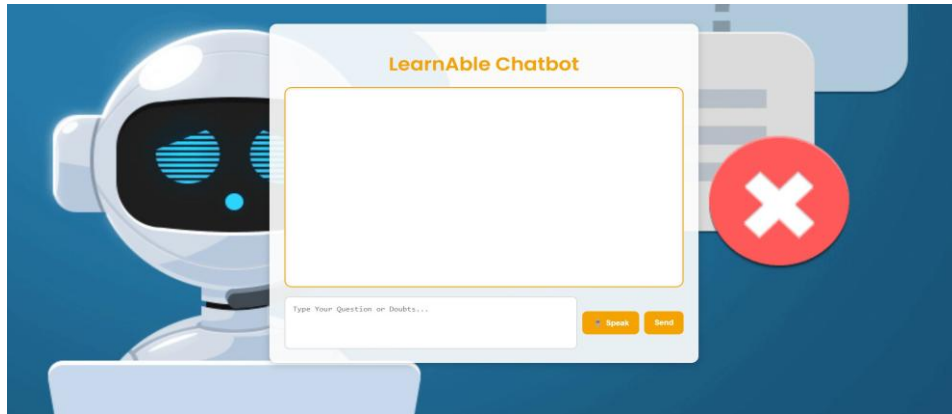


Fig. A2.2. Edumate home page

## Interacting with chatbot:

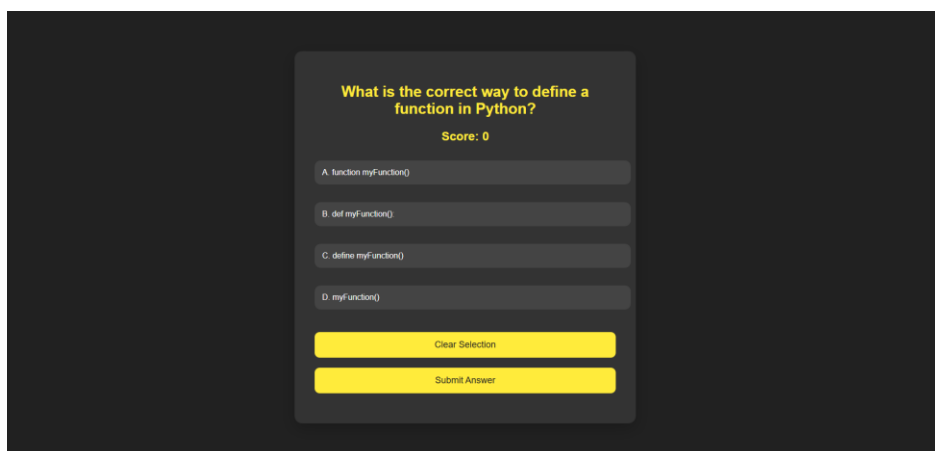
This interface represents an intuitive design approach, integrating AI-based summarization and speech interaction for enhanced user experience in digital learning environments.



**Fig. A2.3** Interacting with chatbot

## Python quiz interface:

This figure illustrates a multiple-choice quiz interface designed to assess Python programming knowledge. The question presented asks, 'What is the correct way to define a function in Python?' with four answer choices labeled A to D. The interface employs a dark theme with a sleek, modern design, featuring a black background and yellow text for emphasis.



**Fig. A2.4** Python quiz interface

## YouTube Video Search and Translation Interface:

This figure shows a web-based application designed to enhance video accessibility by enabling users to search for YouTube videos and translate their audio. The search results are displayed in a structured format, making it easy to navigate and select relevant videos. The search results are displayed in a structured format, making it easy to navigate and select relevant videos. When a user clicks on a video, the system processes the original audio and generates a translated version in the language of the user's choice.

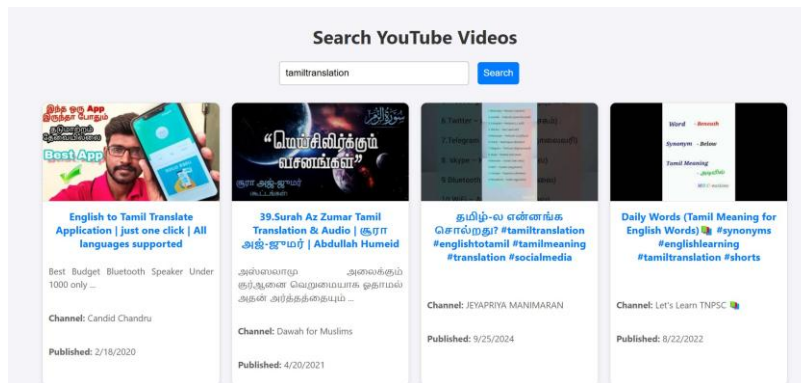


Fig. A2.5 YouTube video search and translation interface

## Mock Interview Interface:

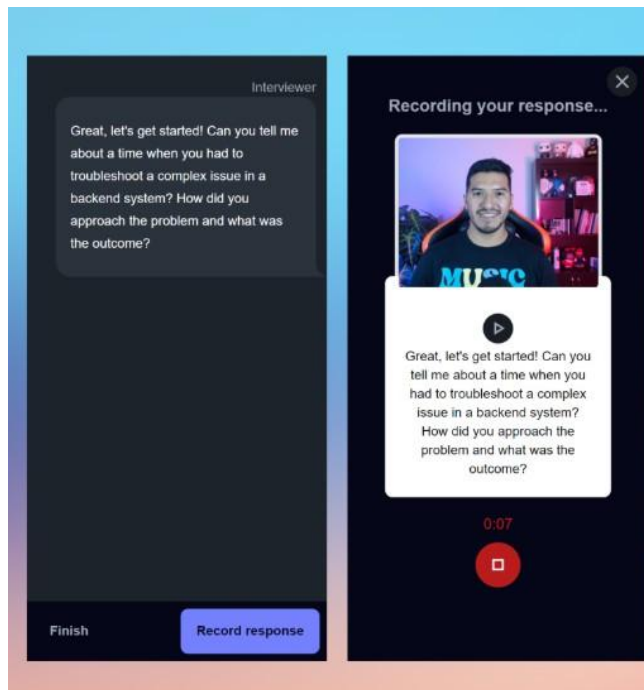


Fig. A2.6 Mock Interview Interface

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# EDUMATE - A PERSONALIZED LEARNING PLATFORM

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**Abstract**—The goal of Edumate is to develop a comprehensive platform that addresses issues with interview preparation, skill development, and individualized learning. The software offers a complete solution by incorporating features like career counseling, AI-powered recommendations, pronunciation training, real-time feedback, and an Interactive Whiteboard for problem-solving. To assist users in maintaining focus on their learning objectives, it also provides timely notifications. To assist users improve their skills and succeed in their careers, the platform aims to make learning more efficient, individualized, and accessible.

## I. INTRODUCTION

Pursuing skill development and career preparedness has grown in importance in recent years for people looking to advance their career chances. Static materials like textbooks, prerecorded courses, and generic training programs have historically played a major role in learning and interview preparation. Real-time feedback and customized skill development were hampered by these approaches' frequent failure to meet individual learning needs. In addition to impeding effective learning, this lack of flexibility made it challenging for users to monitor their development and advance critical abilities like technical proficiency, problem-solving, and communication.

We have resorted to more dynamic and AI-driven solutions that improve the educational process in order to address these issues. Edumate seeks to offer a comprehensive and individualized learning platform by utilizing AI-powered recommendations, real-time feedback mechanisms, pronunciation training, and interactive problem-solving tools. To assist users stay on track with their learning objectives, career advice capabilities, for example, guarantee that users receive recommendations that are specific to their skill sets and career goals. Furthermore, users can pinpoint and enhance their weak areas with the help of the platform's AI-powered analysis, guaranteeing ongoing preparation development.

However, the lack of interactive involvement in traditional learning platforms makes it difficult for users to successfully retain knowledge. We can now provide real-time insights, individualized coaching, and immersive learning experiences that are tailored to each student's needs thanks to developments in artificial intelligence and adaptive learning technology. In order to establish a more effective and user-focused method of skill development, Edumate adopts these advances. The platform improves accessibility and

engagement by including AI-powered coaching, an interactive whiteboard for problem-solving, and timely notifications, enabling users to succeed professionally in a job market that is becoming more and more competitive.



Figure 1.1 technical stack

## II. RELATED WORKS

### 1. AI-Powered Personalized Learning

Artificial intelligence and adaptive algorithms are used by personalized learning systems to customize course materials according to each user's learning preferences and progress. The usefulness of AI-driven recommendation systems in e-learning platforms, where machine learning models examine user interactions to offer tailored study materials, as demonstrated by research by Chen et al. (2020). AI-driven recommendations have been incorporated into platforms such as Coursera, Udemy, and Khan Academy to offer learners personalized course recommendations according to their interests and performance.

### 2. Real-Time Feedback and Pronunciation Training

In the field of language acquisition and improving communication abilities, real-time feedback techniques have been extensively researched. Research like that done by Xu and Lee (2019) shows how AI-powered speech analysis tools can help with fluency and pronunciation. Speech recognition and deep learning are used by programs like Google's Read Along, ELSA Speak, and Duolingo to evaluate pronunciation and offer in-the-moment corrections, assisting students in becoming more proficient speakers.

### 3. AI-Based Career Guidance and Skill Assessment



Numerous studies have examined AI-powered career guidance systems, such as those by Patel et al. (2021), which address the use of AI-powered career recommendation engines. To provide individualized career trajectories, these systems examine a user's skill set, learning preferences, and employment market trends. AI-based tests have been incorporated into platforms like LinkedIn Learning and Skillshare, which direct users toward appropriate employment prospects according to their interests and skill gaps.

#### 4. Interactive Whiteboards and Problem-Solving Tools

In both academic and corporate training settings, the use of Interactive Whiteboards (IWBs) for skill development and group learning has become increasingly popular. Johnson et al.'s research from 2022 highlights how interactive learning environments might improve students' ability to solve problems. Through collaborative activities and real-time brainstorming, platforms like Microsoft Whiteboard, MURAL, and Miro help users develop their technical problem-solving and critical thinking skills.

#### 5. AI Chatbots for Learning and Interview Preparation

Artificial intelligence (AI)-powered chatbots are being utilized more and more in the classroom to help with practice interviews, give prompt answers, and lead users through organized learning processes. Zhou et al. (2020) found that by offering practice situations and immediate feedback, AI chatbots combined with Natural Language Processing (NLP) can greatly increase learner engagement and performance. AI is used by established platforms such as HireVue, Pramp, and InterviewBuddy to conduct simulated interviews, evaluate responses, and offer suggestions for improvement.

### III. PROPOSED SYSTEM

#### System Overview

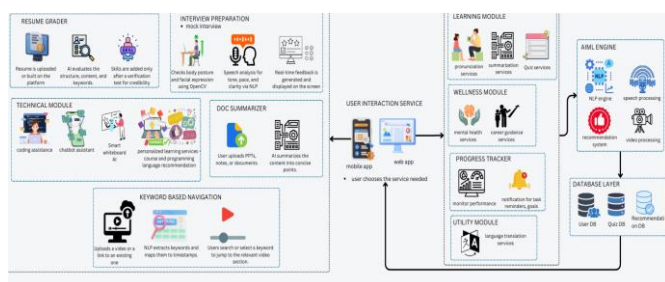


Figure 3.1 overview of the system

The proposed system, EDU-MATE, is an advanced educational technology platform designed to enhance skill development, facilitate interview preparation, and provide personalized learning experiences. The platform integrates Artificial Intelligence (AI) and Machine Learning (ML) techniques to deliver real-time feedback on user engagement, including facial expressions, posture, and speech clarity. By incorporating Natural Language Processing (NLP), the system improves pronunciation and communication skills, thereby refining the overall learning process.

A key feature of EDU-MATE is its AI-powered learning path recommendation system, which tailors educational content

based on the user's progress and career aspirations. Additionally, the system includes an interactive whiteboard for problem-solving, debugging, and collaborative learning. To enhance accessibility, the platform offers customizable user interfaces, allowing learners to adjust the system according to their preferences.

Furthermore, parental and teacher monitoring tools are embedded within the platform to track student progress and provide insights into their learning patterns. The system also supports real-time notifications using Twilio services, ensuring that users receive timely updates regarding their learning goals. Additionally, a 24/7 AI-driven chatbot is incorporated to provide continuous support and guidance.

The technological framework of EDU-MATE is built using Html,Css for frontend development and Flask for backend processing, ensuring a seamless and scalable architecture. By leveraging cloud-based infrastructure and modular design principles, the system remains adaptable to increasing user demands, making it a highly efficient and scalable educational solution.

#### System Architecture

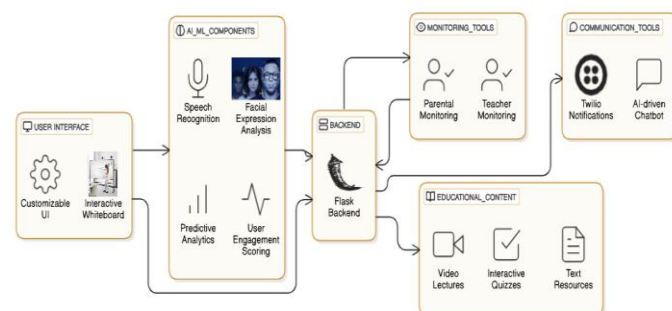


Figure 3.2 system architecture

The system architecture integrates AI and machine learning components with a user interaction service, backend processing, monitoring tools, educational content, and communication modules. The AI/ML components include speech recognition, facial expression analysis, predictive analytics, user engagement scoring, resume grading, interview preparation using OpenCV for body posture and facial expression analysis, and speech analysis for tone, pace, and clarity using NLP. The technical module supports coding assistance, chatbot functionalities, a smart whiteboard AI, and personalized learning recommendations for courses and programming languages. A document summarization feature allows users to upload PPTs, notes, or documents, which are then condensed into concise points using AI. Keyword-based navigation facilitates content accessibility by extracting keywords and mapping them to timestamps in uploaded or linked videos. The system employs a Flask backend for managing operations and integrating monitoring tools for parental and teacher supervision. The communication tools encompass Twilio notifications and an AI-driven chatbot for user engagement. The educational content module includes video lectures, interactive quizzes, and text resources for effective learning. The user interaction service is accessible via a mobile app or web application, allowing users to select



the required services. The system supports a wellness module offering mental health services and career guidance, a progress tracker that monitors performance and sends task reminders, and a utility module featuring language translation services. The AI/ML engine integrates an NLP engine, speech processing, video processing, and a recommendation system. The database layer comprises a user database, a quiz database, and a recommendation database, ensuring efficient data storage and retrieval for enhanced user experience and system performance.

## User Interface Design

### User Login

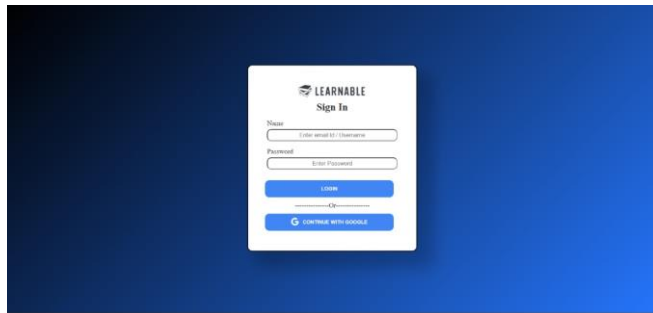


Figure 3.3 user login page

This figure illustrates the user authentication interface for the LEARNABLE platform. The login page is designed with a clean and modern user experience, featuring a centered authentication form against a gradient blue background. The form includes input fields for entering a username or email and a password, along with a primary login button labeled 'LOGIN.' Additionally, an alternative authentication method is provided via a 'CONTINUE WITH GOOGLE' button to facilitate seamless sign-in through third-party authentication services. The design ensures simplicity and ease of access, enhancing user experience while maintaining security standards. This interface represents a fundamental component of web-based platforms requiring authentication for secure access to personalized content and services.

### Edumate: AI-Powered Learning Hub UI

The figure below shows the user interface of the Edumate platform, an AI-powered educational assistant. The top section of the interface features a navigation bar with multiple menu options, including 'Mental & Career Guidance,' 'Chatbot,' 'Quiz,' 'Navigator,' 'Features,' and 'Contact.' Below the navigation bar, a welcoming banner displays the text 'Welcome to Edumate!' along with a subheading emphasizing its role as an education companion. A prominent 'Get Started' button is centrally placed for user engagement.

The lower section of the interface showcases the 'Summary Chatbot' module, designed to process and summarize user-inputted text. The chatbot interface consists of a text input box labeled 'Type or paste your text to summarize...' where users can enter text. Beneath the input field, there are two interactive buttons: 'Summarize' for text processing and 'Speech' for audio-based interaction. The chatbot module employs a visually contrasting color scheme, with a yellow-bordered black panel to highlight its functionality.

This interface represents an intuitive design approach, integrating AI-based summarization and speech interaction

for enhanced user experience in digital learning environments.

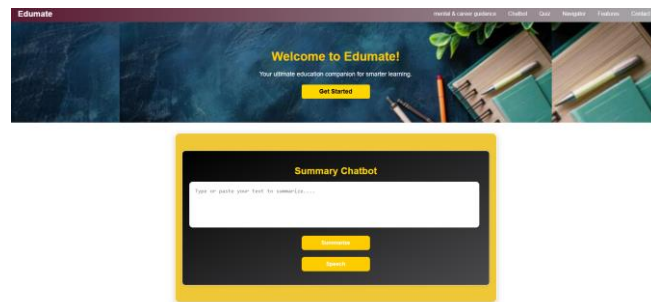


Figure 3.4 Edumate Homepage Interface

### Interacting chatbot with User

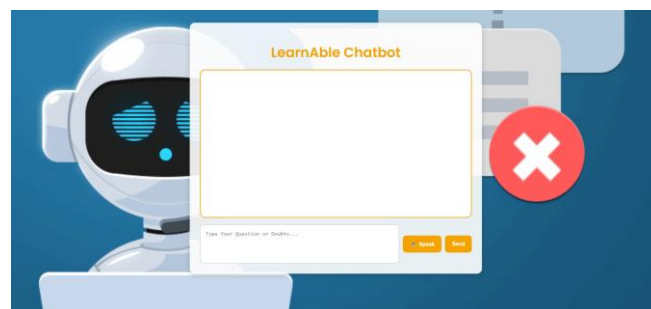


Figure 3.5 interacting with chatbot

This figure illustrates the user interface of the LearnAble Chatbot, an AI-powered educational assistant designed to facilitate interactive learning. The interface features a text input field where users can type their questions or doubts, along with a 'Speak' button that enables voice-based interaction for enhanced accessibility. A structured chat window displays responses in real time, ensuring a seamless user experience. The chatbot leverages natural language processing (NLP) to interpret queries and provide accurate educational support. The visually appealing design incorporates a futuristic AI-themed background, reinforcing its role as an intelligent learning companion.

### Python Quiz Interface

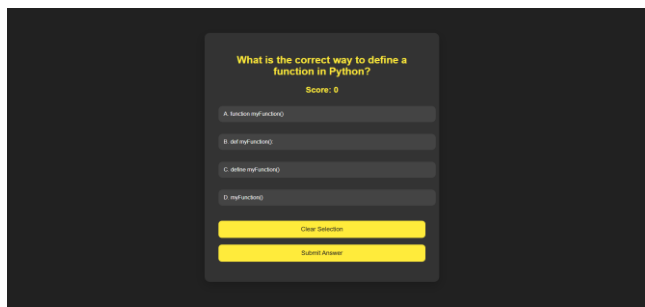


Figure 3.6 Multiple-Choice Question Interface

This figure illustrates a multiple-choice quiz interface designed to assess Python programming knowledge. The question presented asks, 'What is the correct way to define a function in Python?' with four answer choices labeled A to D. The interface employs a dark theme with a sleek, modern design, featuring a black background and yellow text for emphasis. The answer options are displayed in gray, ensuring clear visibility. A scoring system is indicated at the top, currently displaying a score of 0. Below the answer choices, two prominent yellow buttons labeled 'Clear Selection' and 'Submit Answer' allow users to reset their choice or confirm their response. This design enhances usability, making it intuitive for users to interact with the quiz system.

## YouTube Video Search and Translation Interface

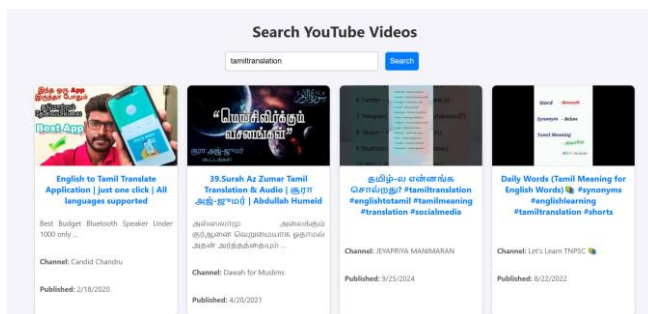


Figure 3.7 YouTube Video Search and Translation Interface

This figure shows a web-based application designed to enhance video accessibility by enabling users to search for YouTube videos and translate their audio. The search results are displayed in a structured format, making it easy to navigate and select relevant videos. When a user clicks on a video, the system processes the original audio and generates a translated version in the language of the user's choice. This functionality helps break language barriers and provides a more inclusive viewing experience. Additionally, users can download the translated audio for offline use.

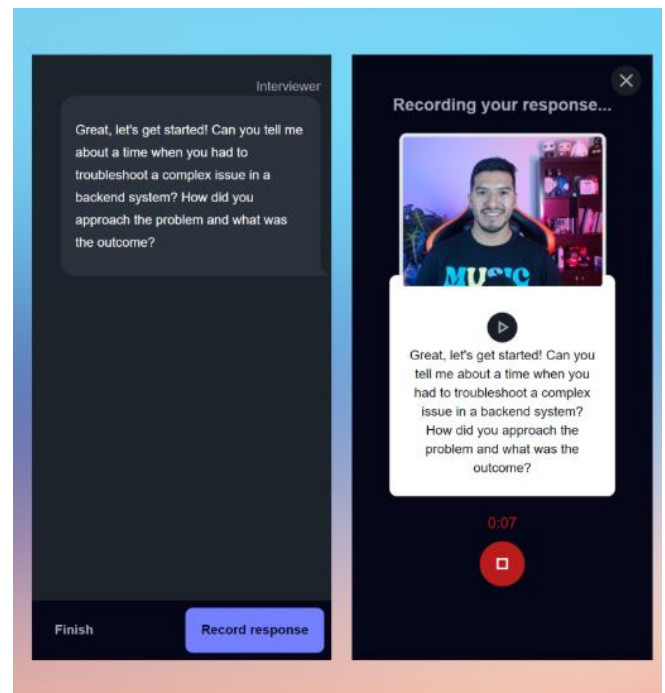


Figure 3.8 Mock Interview

The figure illustrates an AI-driven mock interview system designed to assess a candidate's communication skills through voice and body language analysis. The left side of the figure displays an interactive interview interface where the system presents AI-generated behavioral and technical questions. The right side showcases the real-time response recording interface, where the user's video and audio inputs are captured for further analysis. The system leverages speech recognition and natural language processing (NLP) to evaluate verbal responses, analyzing factors such as fluency, clarity, tone modulation, and confidence. Simultaneously, computer vision and pose estimation techniques track facial expressions, eye contact, posture, and hand gestures to assess non-verbal communication. The AI model detects patterns indicating nervousness, engagement, or confidence by examining micro-expressions and movement consistency. Once the recording is completed, the system generates a detailed performance report, providing insights into key areas of improvement. The report includes speech clarity scores, sentiment analysis, filler word usage, and body language assessments. Additionally, AI-driven suggestions help users refine their responses, improve confidence, and enhance their professional presence. By combining multimodal AI analysis, this system provides a comprehensive and objective evaluation, making it an effective tool for interview preparation and skill development.

## System Workflow

## Mock Interview

**ALTRON 8.8 Learning Workflow**

The diagram illustrates the learning workflow across various system components over time. The components (swimlanes) are: User, Screen, Auth, Dashboard, AI Engine, Workbook, Tools API, Chatbot, Monitoring, and Personalized Feedback.

**Workflow Steps:**

- Registration and Authentication:**
  - User registers and authenticates on the Screen.
  - Auth handles authentication and authorization.
  - User logs in on the Screen.
- Dashboard Generation:**
  - Screen generates personalized dashboard data.
  - Auth handles authentication and authorization.
  - Dashboard displays user information and feedback suggestions.
- Learning Path Recommendation:**
  - AI Engine recommends learning paths based on user information.
  - Workbook provides exercises and solutions.
  - Tools API provides real-time problem-solving support.
- Problem Solving and Progress Tracking:**
  - User solves a problem on the Screen.
  - AI Engine provides a solution.
  - Workbook tracks user progress.
- Feedback and Monitoring:**
  - User provides feedback on the Screen.
  - Monitoring tracks user progress.
  - Personalized Feedback provides personalized feedback.

#### IV.WORKING PRINCIPLE

To guarantee a flexible and intelligent learning environment, this system offers interactive whiteboard features, AI-driven resume grading, personalised learning paths, and mock interview simulations. Furthermore, accessibility and scalability are improved by combining cloud computing with real-time notifications.

1. Registering a user and logging in

Data is gathered by the system in order to customize recommendations.

There is an interactive whiteboard available for debugging and problem-solving.

AI creates technical and behavioural interview questions. Fluency, confidence, and clarity are evaluated through real-time response recording. Sentiment analysis assesses emotional reactions and stress patterns.

### C. Monitoring, Notifications, and Content Interaction

### 1. Intelligent Content Distribution:

Learning resources are easily accessible through keyword-based video navigation.

Key points are extracted from uploaded notes and PowerPoints using AI-driven text summarisation.

YouTube videos can be found and translated into other languages by users.

### 2. AI Chatbot & Round-the-Clock Support:

The chatbot helps users with summarising, learning, and solving problems.

Both text-based and voice-based communication are made possible by NLP.

### 3. Monitoring by Parents and Teachers:

Parents and teachers can keep an eye on learning with real-time progress tracking.

Notifications based on Twilio keep users informed about objectives and tasks.

### 4. Cloud scalability and data storage:

Data, user progress, and analytics monitoring are all managed by the Flask backend.

Data storage and retrieval are made easy by cloud infrastructure.

Output:

EDU-MATE uses AI-powered personalised learning pathways and sophisticated skill analysis that assesses speech clarity, posture, and facial expressions. Its AI-powered simulated interviews offer instant feedback on communication and confidence, and text extraction technology creates condensed study materials for effective learning. Programming skills are evaluated by a clever quiz system, and student progress tracking is improved by teacher-parent insights. Twilio alerts and an AI chatbot guarantee real-time assistance, resulting in a dynamic, adaptable, and successful educational experience. EDU-MATE becomes the perfect educational partner for professionals, educators, and students by combining AI/ML, NLP, speech processing, and computer vision.

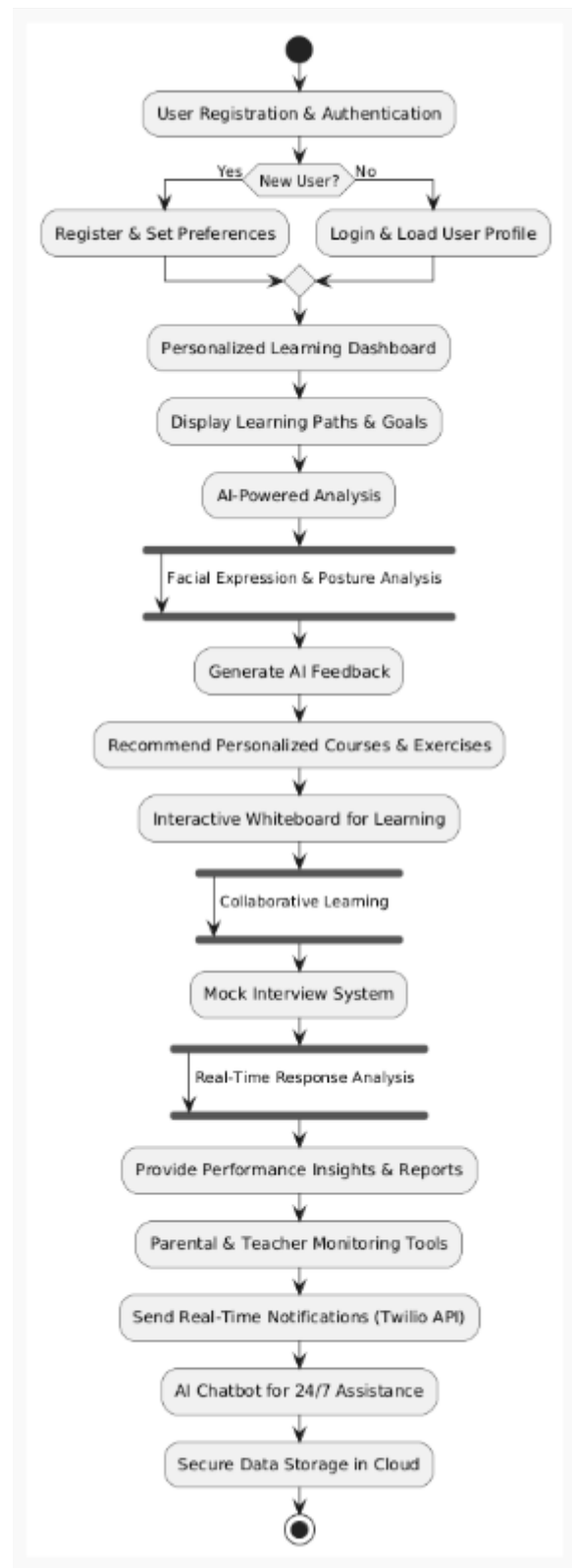


figure 4.1 flowchart for working principle

## V. CONCLUSION

The EDU-MATE system is a cutting-edge AI-powered learning platform that uses interactive tools, personalized recommendations, and real-time feedback to improve learning experiences. The platform offers an intelligent, adaptive, and user-centric learning environment by combining Artificial Intelligence (AI), Machine Learning (ML), Natural Language Processing (NLP), and Computer Vision.

By efficiently analysing user engagement through posture, speech clarity, and facial expressions, the system aids students in developing their communication abilities. Interactive tools like the whiteboard, chatbot, quizzes, and mock interviews improve skill development and interview readiness, and its AI-powered learning path recommendation\*\* guarantees that users receive personalised educational content suited to their progress and career goals.

Furthermore, the platform's cloud-based architecture teacher/parent monitoring features, and Twilio-based real-time notifications guarantee that it stays effective, scalable, and accessible.

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10:00 AM

VoLTE 4G 39



to sureshkumar.s, 221801006,...

Greetings from the Organizing Committee of NCMLACNT'25.

We are pleased to inform you that your research paper titled: "EDUMATE - A PERSONALIZED LEARNING PLATFORM" has been accepted for presentation at NCMLACNT'25, scheduled to be held on 16.04.2025 at R.M.D.ENGINEERING COLLEGE by Department of AIML.

Our review panel found your work to be relevant and technically valuable. We appreciate your efforts in addressing the plagiarism concerns and ensuring the similarity index is within the acceptable limit (below 10%).

Kindly complete the following steps to confirm your participation:

1. Submit the final camera-ready paper by 13.04.2025 in IEEE format.
2. Complete the registration process on or before [ 14.04.2025 ].
3. Prepare a 10–12 minute presentation for the **conference** session.

We look forward to your active participation and contribution to the success of the **conference**. Should you need any assistance or clarification, feel free to contact us.

**Best regards,**  
**Conference Organizing Committee**

*With Regards,*  
**Dr. C AMBHIKA,**  
*Associate Professor*



9:58 AM

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On Thu, 17 Apr, 2025, 3:39 pm ICLTSET KIT,  
<[icltset@karpagamtech.ac.in](mailto:icltset@karpagamtech.ac.in)> wrote:

Dear Sir/Madam,

Thanks for submitting your paper to ISTE Sponsored 12<sup>th</sup> International Conference on Latest Trends in Science, Engineering and Technology (ICLTSET'25) organized by Karpagam Institute of Technology, Coimbatore to be held on April 26, 2025.

Based on reviewer comments and suggestions, **the list of accepted articles is attached and recommended for presentation in ICLTSET'25.** Herewith we have attached the Manuscript format and registration form for paper publication in conference proceedings. Prepare your paper according to the manuscript format which is attached herewith.

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