Personalized Academic Content and Predictive Analytics and Early Intervention for Each Child

24-25J-103

Project Proposal Report

Niyangoda S.A.N.S.H IT21194962

B.Sc. (Hons) Degree in Information Technology

Specializing in Software Engineering

Department of Computer Science and Software Engineering Sri Lanka Institute of Information Technology

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DECLARATION

I declare that this is my work. This proposal does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any other university or institute of higher learning. To the best of my knowledge and belief, it does not contain any previously published material written by another person except where the acknowledgment is made in the text.

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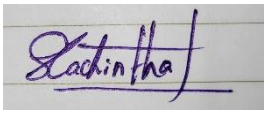
Niyangoda S A N S H	IT21194962	

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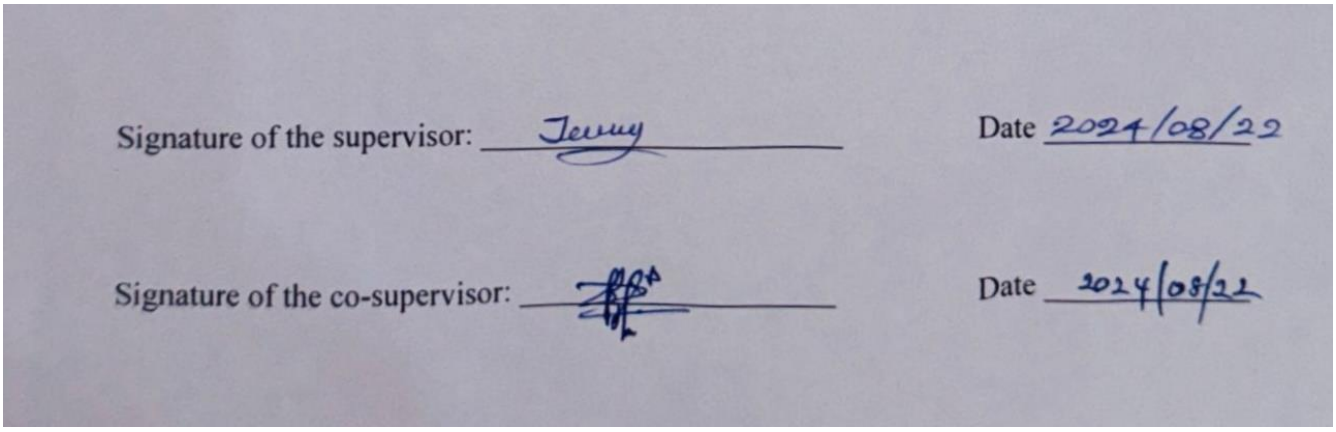

ABSTRACT

This project will enhance children's Academic English language skills between the ages of 10 and 12 through an interactive, personalized, dynamic educational tool, whereby personalized academic content is mixed with predictive analytics. The system is developed using the MERN stack and TensorFlow and collects data related to key performance indicators:(KPI) percentage of quiz completion, time spent on learning activities, and reading volume. This data is then analyzed to predict the learning trajectory for each child in the future, and when they would fall behind so that early intervention can be conducted for them, or advanced content be offered if they are doing excellently. The system adapts in real-time to each student, ensuring that educational content remains appropriately challenging and engaging. In project development, due attention will be paid to ethical considerations regarding the privacy and security of data pertaining to children. The user interface is child-friendly, adding to the experience of using it.

By employing highly developed machine learning techniques with a real-time emphasis on adaptability, this project will be a major step forward in education technology. The system will predict and adapt to individual learning needs to create a very personalized, powerful, rich learning environment that sets a totally new benchmark for language education tools.

Keywords: Academic English language skills, Children (ages 10-12), Interactive educational tool, Personalized academic content, Predictive analytics, MERN stack, TensorFlow, Key performance indicators(KPI), Quiz completion, Learning activities, Reading volume, Learning trajectory, Early intervention, Real-time adaptability, Data privacy and security, Child-friendly interface, Machine learning, Education technology, Personalized learning environment, Language education tools,

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LIST OF ABBREVIATIONS

Abbreviation	Definition
AI	Artificial Intelligence
ML	Machine Learning
MERN	MongoDB, Express.js, React.js, Node.js
KPI	Key Performance Indicator
MOOC	Massive Open Online Course
UI	User Interface
UX	User Experience
LKR	Sri Lankan Rupee
AR	Augmented Reality
VR	Virtual Reality
SEO	Search Engine Optimization

1. INTRODUCTION

In the current fast-moving world, academic English language is very necessary, particularly for 10 to 12-year-old children. Years ranging from 10 to 12 are the crucial years for the students for their academic development while language proficiency is directly related to the ability of understanding and grasping the content of the course. At the same time, traditional ways of education often appear insufficient for the diverse learning needs of individual students, especially in terms of acquiring another language.

These advances in educational technologies have opened up opportunities to implement personalized learning that can fully leverage AI and ML to adapt content based on individual student requirements.

Despite these innovations, existing solutions often lack the capability to adapt in real-time, a critical feature for ensuring that students remain engaged and challenged at an appropriate level. Furthermore, many current systems are not specifically designed for language education, focusing instead on subjects like mathematics or science. Such gaps would be addressed with this project by developing a dynamic educational tool that enhanced skills in Academic English Language using personalized content and predictive analytics. In the context of MERN stack and TensorFlow, the system uses several key metrics to harvest and analyze key performance indicators (KPI) such as quiz completion rates, and learning activity time, comparing with peers. This data can be used for making predictions of learning paths for each child, which helps intervene in a timely manner when students are found to struggle and provide advanced content for those who do well.

The overall significance of this project is the possibility to change how academic English language education, in its current practices, may be delivered, a new standard for personalized learning tools. The system thus ensures, with its real-time adaptability and alertness, that no child is left behind and that every student gets what he/she deserves for success. Ethical considerations of data privacy and security are at the fore in developing the project for the handling of children's information with care. This report presents detailed information on the objectives, methodology, system design, and testing procedures of the project in order to give an overview of how this innovative educational tool shall be developed and put into application.

1.1 Background

In the digital era, among all languages, Academic English is probably one of the most important languages which children between the age group of 10 to 12 years have to be proficient in if they have to be successful in academics. This window is so crucially formative for future academic achievements, and language proficiency is part of the foundation for them. Traditional educational methods, however, tend to adopt a one-size-fits-all approach, and probably this is what fails to meet the differentiated learning needs of students [1] As a result, some students could fall behind in the class, while others are underchallenged; this leads to disengagement and inappropriate outcomes.

Recent developments in learning technology, especially the infusion of AI and machine learning, have really unlocked new possibilities for personalized learning.

Such technologies enable system design in a manner to a level that they can individualize educational content based on the individual learning needs, which supports engagement and results in successful outcomes [2]. Despite the effectiveness presented by personalized learning systems, very few of the current solutions can flexibly adapt their instructional strategies as the need arises to assist learners in satisfying their learning needs to an appropriate standard. [3].

Most educational tools focus on the study of mathematics and science, while paying much less emphasis on the study of languages. This is significant since language has been noted to provide a key foundation for most academic practice across the board [4]. Again, most of these systems have not fully resolved some of the serious ethical issues when it comes to children's privacy and data security in the implementation of AI in educational environments [2].

This project shall bridge these gaps through the development of an education tool that can enhance Academic English language skills in children between the ages of 10 and 12 years. Leveraging the MERN stack and TensorFlow, the solution will use predictive analytics to adapt learning content in real time, offer early interventions for students at risk of falling behind, and advanced content for high performers [5].This approach guarantees not only

that every student is met with an appropriate level of challenge but also that serious ethical issues in relation to data privacy and security are addressed by implementation of robust safeguards.

1.2 Literature Survey

The landscape of educational technology has been mostly innovative during the last decades, showing a strong emphasis on personal learning and predictive analytics. These are driven by the needs, as students have shown diverse learning needs, especially in regard to foundational subjects that underlie all other learning, for example, academic English.

1.2.1 Personalized Learning Systems

Personalized learning systems are designed to tailor their educational content toward individual students with given needs, abilities, and paces at which they learn best. This stands in contrast to what has been the historical lens toward education, where there is a uniformed curriculum that is created for all students, despite a set of unique needs [1]. In doing so, it is clear that student-centered learning will push to answer questions and concerns that exist within society regarding problems of traditional learning. Research has shown that personalized learning can lead to enhanced student engagement and better academic outcomes, especially when these systems are integrated with AI and machine learning technologies. [6]

Furthermore, the study by Luckin et al. [7] looked at what is considered to be the next generation of intelligent tutoring systems, since they can have the capacity to ensure personalization of feedback and tuning into the learning path of a student in real time. In the work done by McNamara and Graesser [8], there was a study on the use of Coh-Metrix, which analyzes text characteristics at many levels to support personal learning, thereby indicating that adaptive content is critical in achieving optimized reading comprehension.

However, most personalized learning systems have been heavily invested in, especially in the area of mathematics and science, to the detriment of language education. It is a big gap because proficiency in language is a major determinant of how well one fares in academics

generally [2]. Additionally, their adaptability is often static in realistic contexts where immediate change of content is required to regain student attention and direction on task. [3].

1.2.2 Predictive Analytics in Education

Predictive analytics employs statistical models and machine learning algorithms in analyzing previous and current data to predict future outcomes. In an education context, predictive analytics could be used to spot students who are likely to lag behind and intervene in a timely manner [5]for instance, Akçapınar et al. [9], designed an early-warning system with eBook interaction logs that might use, for example, to identify at-risk students.

Predictive analytics should be used in a personalized learning environment as it ensures constant updating of information on students' performance. This has to be used to adapt learning contents according to the circumstances. In the context of detecting at-risk students in language education, Er [10] did a case study based on machine learning methods where models in educational applications found beneficiary. Even though predictive analytics is using successfully in many areas of education, there is no promising work on language education.

Moreover, an issue associated with adaptive learning systems is the integration of predictive analytics in real-time adaptive learning systems. Most of the available systems provide feedback according to one's past performances; however, they do not predict future needs and change content on the go [11]. This need is severely felt in language education, where continuous and immediate feedback forms the spine of effective learning.

1.2.3 Real-Time Adaptability

Real-time adaptivity is the capability of an educational system to update its contents and instructional strategies immediately according to the actual performance of the student.

Its practical implementation becomes very important for an educational system that is capable of engaging a student in the learning process to an extent that is just right, according to Sabourin et al. [12]. In practice, there are quite complex AI and machine learning algorithms needed for really applying real-time adaptability to educational tools in general and language education in particular.

For example, Luckin et al. [7] noted this flexibility of real time that intelligent tutoring systems need while also emphasizing the need for feedback to be immediate and a mechanism to adapt instructional content in the manner in which it is delivered as appropriate. In a related vein, Yang et al. [13] studied how intelligent learning environments could facilitate self-regulated learning through dynamic adaptation of educational content delivered in real time according to the performance exhibited by the learner.

However, up to now no fully comprehensive system with the integration of real-time adaptability into predictive analytics has ever been developed in language education. The majority of systems developed up to date remain more reactive than proactive in nature, hence potentially limit their effectiveness in addressing the immediate learning needs of students [6]. Therein evidence of the need for further research and development.

1.2.4 Ethical Considerations in Educational Technology

For one, many research studies are increasingly focusing on the ethical implications involved in the applications of AI and machine learning technologies in education, especially those concerning data privacy and security. Advanced educational tools come with data capabilities for more collection and analysis than the earlier tools, meaning that these questions related to use and protection are brought out into even sharper relief by tools, for example, among others [2]. In a similar vein, Kizilcec et al. [14] noted that predictive analytics in MOOCs, and considering that it tracks a lot of student information, provide ethical dilemmas pertaining to the requirement for open data policy and very strong security over data transmission to safeguard the students' personal and confidential details. Anderson et al. [15], for its part, also drew implication on the increasing demand to develop ethical principles for data-intensive and student-centered learning environments. With the

advent of personalized learning systems, much is left to security and privacy in student data. This might turn out to be a critical issue in language teaching and learning, as it involves real-time adaptation and predictive analytics, meaning data is collected on a continuous basis. Any such system will therefore require strong protection of data regarding learners and compliance with the relevant legal and ethical safeguards in place.

1.3 Research Gap

Despite significant advances in educational technology, especially in the areas of personalized learning and predictive analytics, several critical gaps still exist, above all in the context of Academic English language education for this age range of children. These gaps point to the need for further research and development in order to create more effective, responsive, and ethically sound educational tools.

1.3.1 Limited Focus on Language Teaching

One of the major gaps in the current landscape of personalized learning systems is the limited focus on language education. While the development and research in personalized learning for subjects like mathematics and science have advanced, relatively underexplored literature within research is the application of these technologies in language education, especially in Academic English [16]. Language proficiency is one of the bases for the whole academic success; currently, the educational tools in this respect are almost missed.

1.3.2 Insufficient Real-Time Adaptability

The other major critical gap is in the real-time adaptability of existing personalized learning systems. Although those tools provide feedback and adjust the content according to past performance data, they mostly do not make adjustments in the immediate, real-time sense to the learning content as the student progresses. This delayed response may eventually lead the student into disengagement because of too easy content or frustration

because of too hard content. The need for real-time adaptability is high in language learning, where pace and content complexity have to be closely tied to the learner's current capabilities.

1.3.3 Gaps in Early Intervention Predictive Analytics

Predictive analytics identified students at risk of falling behind and enabled early intervention. However, most such systems are more generally designed for educational purposes and do not necessarily cater to the specific needs of language learners [9], [5]. Therein lies the biggest challenge: it is the integration of predictive analytics into real-time adaptive learning environments. Quite a few systems effectively try to integrate both aspects in order to provide a wholesome experience for the user, but difficulties remain. Predictive models on language education need to become more specialized to bring timely, data-driven intervention.

1.3.4 Ethical and Privacy Concerns

The wider implementation of AI and machine learning into educational processes, in particular with regard to sensitive student data, gives rise to serious ethical and privacy concerns. Although the issue areas concerning this are pursued by a growing body of research, there still remains a lack of developed comprehensive guidelines and robust safeguards for many educational tools [2], [14]. Of course, this gap is of special concern in systems designed for children since problems related to misuse of data or data breaches only get magnified. It is therefore of the essence that an ethical framework is developed through which student data can be protected from falling into the wrong hands yet allows for the optimum usage of AI-driven educational tools.

1.3.5 Lack of Holistic Integration

Moreover, a serious gap exists with regard to the integrated use of various educational technologies holistically; while tools exist that offer personalized learning or

predictive analytics, or real-time adaptability, few systems are designed which integrate all three for comprehensive learning environments [6]. However, the challenge here is to design a system that intermingles these technologies not only in their incorporation but also in manners that are seamless and user-friendly and can meet a variety of needs of language learners in real time.

1.4 Research Problem

The gaps identified in turn generate several important research problems on which this project is based. These problems will give central importance to the advanced knowledge in educational technology applied to personalized Academic English Language Education for children of 10 to 12 years old.

1.4.1 Lack of Effective Personalized Learning Tools for Language Learning

One of the basic research problems is the lack of effective tools for personalized learning in language education. Although it has been effectively done in subjects such as math and science, there exists a rather large gap in the tools designed for the learning of languages, especially for children in their critical developmental years. [16] The present research study aims to address these through the development of a system that not only customizes to personal learning needs but is specifically focused on enhancing Academic English skills.

1.4.2 Insufficient Real-Time Adaptability in Educational Systems

Another critical issue that is linked to research is the inadequacy of current educational systems to adapt in real-time. Most learning tools do not usually tune difficulty and learning material presented in real-time, mismatching the student's proficiency and the used material. [7] Incongruence can lead to low engagement and ineffective learning outcomes from students. The proposed system attempts to overcome this limitation by the

real-time adaptability of the system, making sure that educational material is always properly matched to students' current needs at all times.

1.4.3 Challenges Implementing Predictive Analytics for Early Intervention

As much as predictive analytics could contribute to furthering early intervention in education, its application inside a real-time adaptive learning environment is still quite challenging. As a matter of fact, most of such systems apply predictive analytics retrospectively: they analyze past performance data for future predictions, yet they lack the capability to integrate these predictions into real-time adaptive learning processes [5], [11]. It is in this project that the developed system will be integrated with predictive analytics for real-time adaptability, with immediate adjustments to educational content in line with predicted learning trajectories.

1.4.4 Ethical and Privacy Concerns about AI in Education

This has been raising several ethical and privacy concerns as AI and machine learning penetrate the education sector and become relied upon day by day, especially in the handling of sensitive student data. Most of the current systems do not solve these issues properly and will expose to potential risks related to data security and student privacy. [2]. Clearly, this identifies a very important research issue, and hence, this project would adopt very strong ethical frameworks and data protection measures to ensure confidential student information handling securely and responsibly.

1.4.5 Integration of Multiple Educational Technologies

Finally, there is a challenge with respect to research to apply multiple educational technologies in such a way that they make a whole and user-friendly system. Tools themselves exist that supply personalized learning, predictive analytics, and real-time adaptability separately, but few systems integrate all three into a single platform. [6] The project tries to contribute in this respect by designing an overall educational tool that will

integrate seamlessly the mentioned technologies in one platform for a full learning experience by students.

2. OBJECTIVES

The main purpose of this project is to create an advanced educational tool that will enhance Academic English language skills in learners aged 10-12 by employing personalized learning, predictive analytics, real-time adaptability, and early warning prediction systems. This general objective could be broken down into a number of specific objectives:

2.1 Main Objective

Design of an Individualized, Adaptive Learning Tool with Early-Warning Score Prediction for Language-Learning:

Develop a holistic educational system that will individualize the content of Academic English for an individual student, automatically adjust to the learning pace and ability of each student, and at the same time integrate early prediction warning so as to be able to identify and support students who are at risk.

2.2 Specific Objectives

1. **Apply Predictive Analytics for Early Warning and Early Response:**
   Design and implement predictive models analyzing student performance data to forecast future learning trajectories and raise early alert signals for students who are more vulnerable to falling below the expected pace of learning. This would give

room for timely intervention so that support may be given in time to advance in their academics.

2. **Introduce Real-Time Adaptiveness into the Learning Process:**
   Implement a system whereby learning content difficulty and type are adjusted in real time to an individual student. It will optimize learning efficiency by maintaining appropriately challenging and engaging educational material.

3. **Improve Academic English Language Skills with Individualized Content:**
   Academic English vocabulary, grammar, reading comprehension, and writing skills are addressed according to each student's existing proficiency level and learning needs through content customization.

4. **Ensure Data Privacy and Ethical Use of AI in Education:**
   Create solid data protection measures for the security of sensitive student information. The system will be designed to adhere to ethical standards in its use of AI, ensuring that student data is used responsibly and that their privacy is maintained.

5. **Validate the System Through User Testing:**
   Allow for intensive tests with real users students and educators who are to judge its effectiveness in helping to improve the Academic English language skills. Collect feedback and correct the tool to allow for achievement of expected educational outcomes.

6. **Design a Friendly Interface for Children:**

Design child-friendly user interfaces that are intuitive and involving, designed in a manner that guarantees that the learner will get completely absorbed and keep interest, along with ease of operation.

7. **Create a Holistic Learning Experience:**
   Combine numerous educational technologies personalized learning, predictive analytics, real-time adaptability, and early warning systems seamlessly into one coherent platform in order to provide students with engaging and comprehensive learning environments.

3. METHODOLOGY

To understand the current state of educational technology(tools) and identify any possible gaps that may exist, a comprehensive background and literature review on real-time predictive analytics in education was undertaken. Using the research gap, the following are the areas of further development to enhance the personalization and responsiveness of the educational tools. The following criteria were set for the new system to work:

It must be an educational tool that will dynamically adapt its content based on real-time student data, in order to effectively deliver to individual learning needs.

The system must fit within existing educational frameworks with the least disruption and maximal usability.

Predictive analytics should be used to foresee the difficulty the student may face and change the learning path before the student falls into difficulty.

This implementation should ensure very fast feedback loops that allow continuous improvement of learning content for optimal student engagement and best results.

3.1. System overview

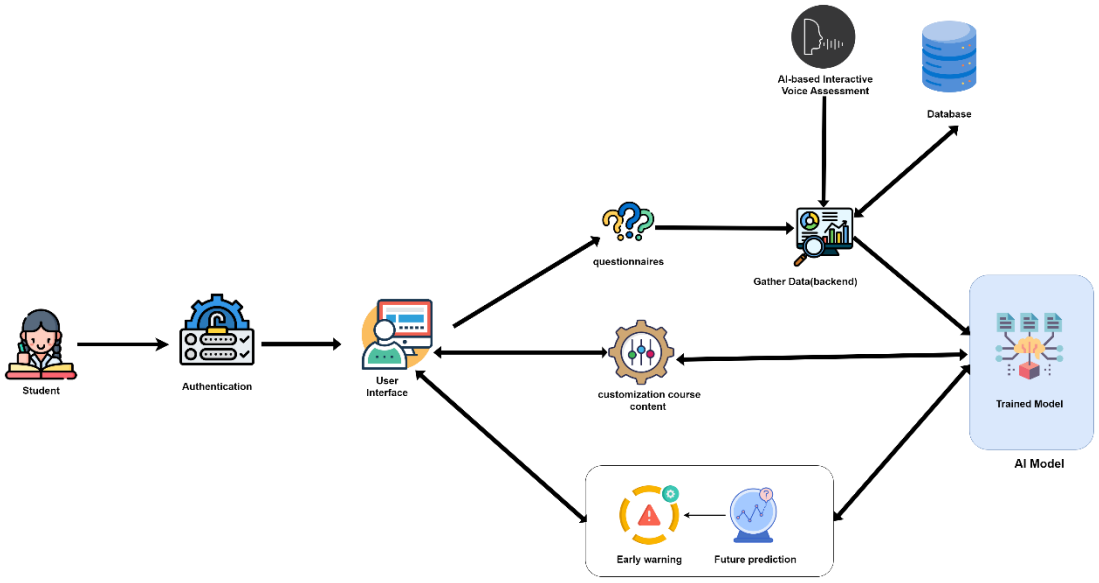

Figure 1 System Overview Diagram

The system starts with the registration and authentication of a user. When a user registers for the first time, some initial assessment questions are given, designed to gauge at least their current level of language proficiency. An exercise of this kind will help to establish some baseline so that the system can at least fix the initial difficulty level regarding the educational content with which the student is going to be working. Registered users have to log in to gain access to their personalized learning space. This space dynamically changes, depending on their real-time results.

When the user logs into the system, it immediately starts to acquire information. As learners engage with the various learning tools, the system captures detailed information about their interaction: for example, quiz scores and response times, among other interaction indicators. This data will be used to train the predictive models of the system, which are used for predicting future performances, in identifying students who may be at risk (danger level) in respect to dynamically changing difficulty of learning content.

A critical component that ensures learner status remains on track is the system's real-time performance monitoring. It analyzes the data it collects on an ongoing basis to determine

if a student is progressing normally or is struggling. When the system recognizes that a student is in danger of failing, it alerts the student as quickly as possible. The alert notifies not only the student but often also the teacher or parent, (from an Email) so interventions can be made quickly.

To the identified risks, the system automatically adjusts the level of difficulty in the content through its dynamic difficulty adjustment mechanism. This ensures that the learning material still presents an optimal challenge level not frustratingly difficult but not very easy for the student. Such changes are continuously made by the system on the basis of the very frequently conducted re-evaluations of students' performance and other related parameters in a quest for constant progress.

Finally, an alert and notification system should be embedded in the system to serve as a safety net for students who might be lost. If a student is flagged as being at risk, the system would subsequently send notifications to encourage the student to concentrate on his or her areas of struggle. It may also offer other types of solutions or course adjustments that would help the student to overcome his or her challenges. Alerts are sent to educators and parents to keep them up to date on learning experiences.

4. REQUIREMENT

4.1 Functional Requirements

- User Authentication and Registration
- Data Collection
- Predictive Analytics
- Dynamic Content Adjustment (based on difficulty)
- Performance Monitoring Dashboard

4.2 User Requirements

Students:

- Ability to access personalized learning content.
- Receive feedback and guidance based on performance.
- Navigate the platform easily and intuitively.

Parents:

- Access their child's progress reports and alerts.
- Provide feedback on their child's experience with the system.

4.3 System Requirements

4.3.1Hardware Requirements

- Servers for hosting the web application and managing databases.
- Computers or tablets for users (students, educators, parents) to access the platform.
- Networking infrastructure to ensure real-time data transmission.

4.3.2 Software Requirements

- Backend: Node.js for server-side scripting.
- Frontend: React.js for building user interfaces.
- Database: MongoDB for data storage.
- Analytics: TensorFlow for implementing predictive models.
- Security: SSL/TLS for secure data transmission and storage encryption.

4.4 Non-Functional Requirements

- Performance
- Scalability
- Security
- Usability
- Reliability

4.5 Gantt chart

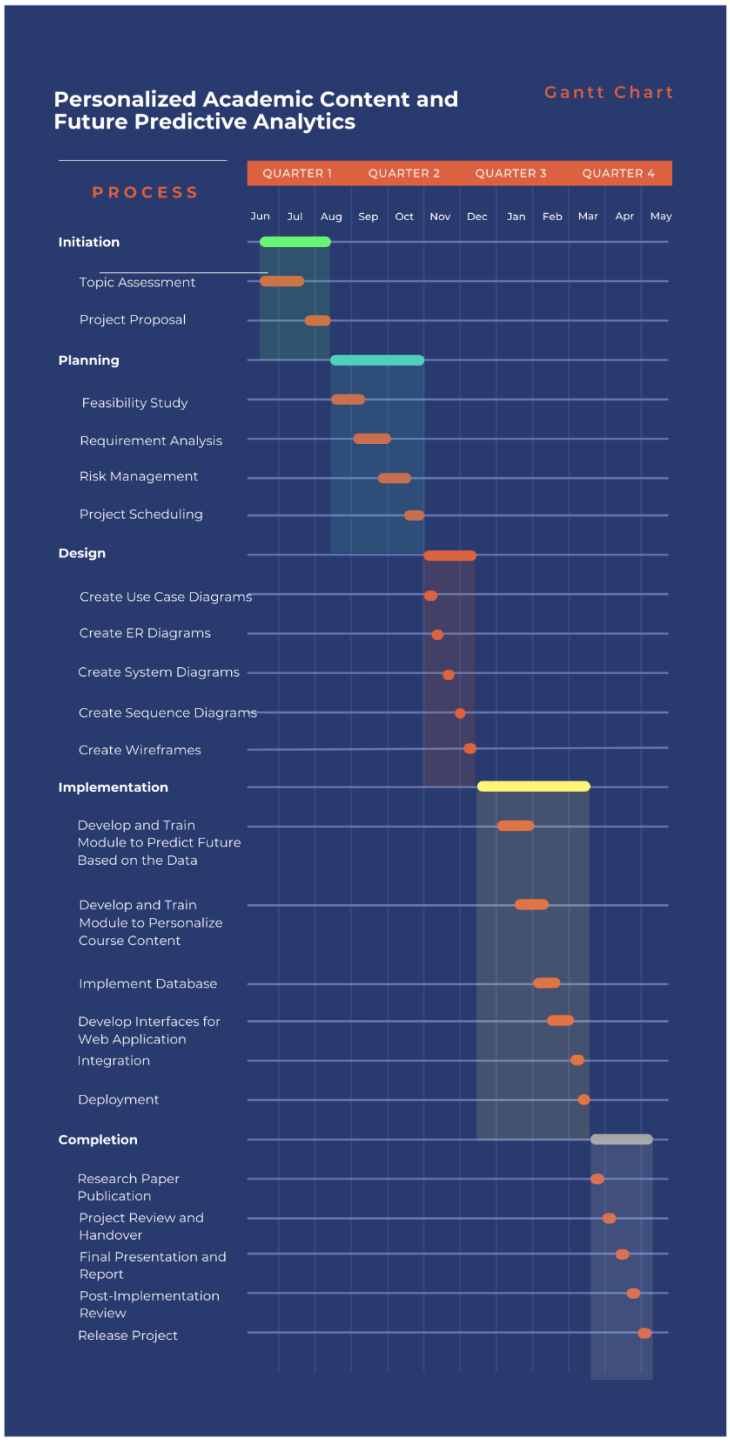

Figure 2 Gantt Chart

4.6 Work Breakdown structure

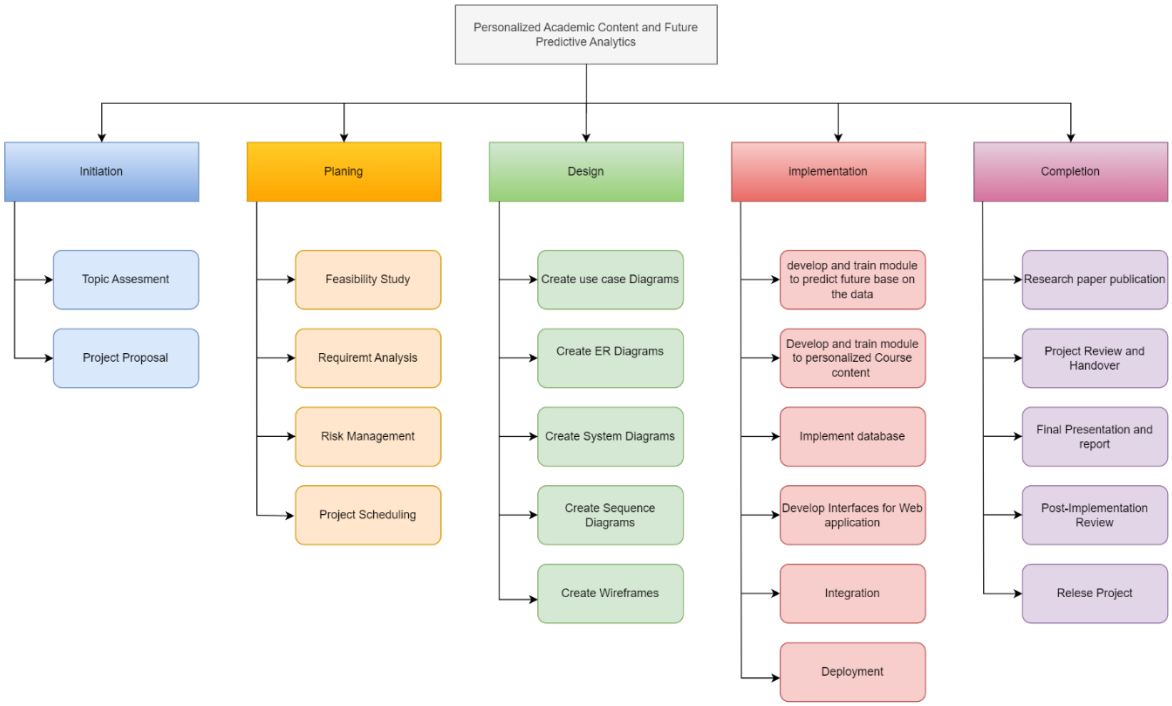

Figure 3 Work Breakdown Structure

4.7 Use Cases

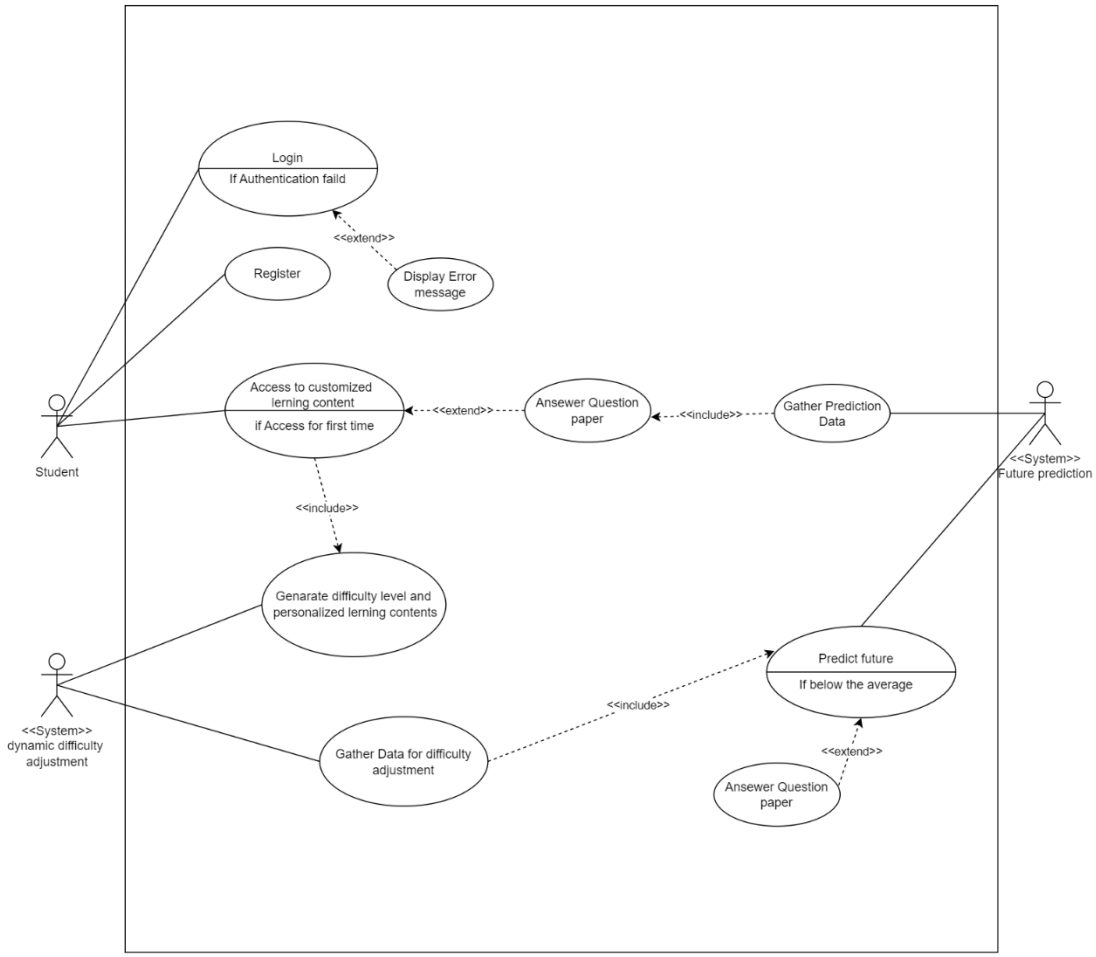

Figure 4 Use Case Diagram

4.8 Wireframes

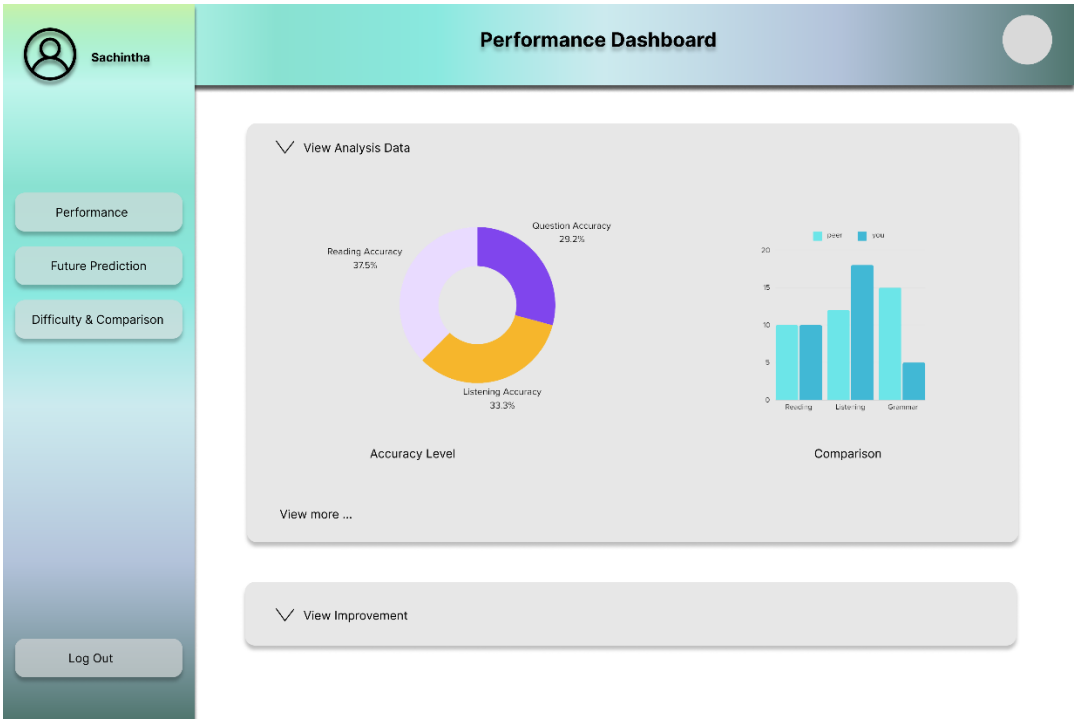

Figure 5 Wireframe - Performance Dashboard

Figure 6 Wireframe - Future Prediction Dashboard

5. BUDGET AND BUDGET JUSTIFICATIONS

5.1 Budget

Budget Topic	Description	Estimated Cost (LKR)	Notes
1. Basic Software Development	Minimal backend and frontend development using open-source tools.	20,000	Focus on essential features only.
2. Basic Hardware Infrastructure	Use existing resources or minimal hardware setup.	20,000	Utilize low-cost or existing hardware.
3. Open-Source Tools	Use open-source software to avoid licensing costs.	10,000	Includes open-source versions of required tools.
4. Basic Data Privacy Measures	Implement basic data protection using open-source security tools.	25,000	Prioritize essential security measures.
5. Basic Testing	Minimal user testing focused on core functionality.	10,000	Limited to critical user feedback and adjustments.

Table 1 Budget Table

5.2 Budget Justification

This project budget has been set up to develop and implement a learning tool that will boost Academic English for children aged 10-12. The list of items in the budget has been carefully selected to ensure that all salient features of the project are covered, yet the costs are minimum.

1. **Basic Software Development (LKR 20,000)**

   This allocation covers the essential costs of backend and frontend development. Open-source tools would be used to mature core functionalities for personalized learning, predictive analytics, and real-time adaptability in the system.

2. **Basic Hardware Infrastructure (LKR 20,000)**
   This infrastructure budget is kept at a bare minimum by utilizing existing resources as much as possible. This ensures that the system has all the infrastructure necessary for smooth performance without having to spend on those things. The hardware will be supported from the development phase to testing and deployment.

3. **Open-Source Tools (LKR 10,000)**
   It is very indispensable for cost minimization. It has incorporated any small spending in terms of open-source tools like features or plugins that the system shall require for better performance.

4. **Basic Data Privacy Measures (LKR 25,000)**
   As the information is quite sensitive, most of the budget will be allotted to the primary data safety measures. They consist of basic security tools that ensure privacy and safety of student information to the standards of ethics.

5. **Basic Testing (LKR 10,000)**
   Without testing by the users, it will not bring out the results it was supposed to, and this makes the user testing vital. This budget allows for minimal but focused testing sessions that provide critical feedback for refining the system. The money will be directed to the testing incentives and any other tools which might be needed for the same.

5.3 Commercialization

This is highly relevant commercialization of the personalized education tool within the scope of the educational technology market. Notably, it falls under the niche for personalized learning systems in the domain of language education.

1. **Target Market:**
   Educational institutions, tutoring centers, and online learning platforms that target children between the ages of 10 and 12 years for enhancing their English language skills. Furthermore, another very important market segment is that of parents who seek additional educational help for their children.

2. **Revenue Model:**
   The tool will be commercialized based on a subscription model, where schools and parents pay a monthly or annual fee to access the online platform. Different tiers of service can be offered, including basic access to the personalized learning platform and premium services that provide advanced analytics, progress tracking, and additional learning content. Another revenue stream could be through licensing the tool to interested schools or other educational institutions that would like to use such a tool but integrate it into their existing learning management systems.

3. **Market Entry Strategy:**
   Partnerships to pilot the tool across different schools and educational institutions to test, post which effectiveness of the tool will be demonstrated. Success stories and testimonies from such pilots can help drive adoption and lend credibility. Online marketing will be used to target parents and educators, including social media marketing, content marketing, and SEO.

4. **Scalability and Expansion:**
   The tool shall be designed to allow for scalability, and expansion to other age groups and subjects beyond the non-English native speaker market is envisioned. This kind of adaptability in the product will scale to what users need, thereby widening the market reach of the product. This could be further added to the model, which then would translate into multiple languages at later stages. This would provide the system with opportunities to drive into a wider non-English market.

5. **Competitive Advantage:**
   The USP of this tool is the fact that it can be used in real-time and its predictive analytics, which are not found in most of the other educational tools. These two facilities can make it more personalized and useful in the case of the tool.

6. **Future Opportunities:**
   With the acquisition of traction of the tool, possibilities have begun to enlarge with its functionality by attaching it to other educational technologies such as augmented reality (AR) and virtual reality (VR), which will improve the learning experience.

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