Bliss2Glamour: An Artificial Intelligence Integrated Educational Platform for Skincare and Beautician Training

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Abstract - This research paper represents Bliss2Glamour, an artificial intelligence (AI) based educational platform developed to assist all the NVQ Level 4 blooming beauticians, qualified lecturers, and beauty enthusiasts. Bliss2Glamour has an integrating Learning Management System (LMS), well trained AI chatbot, Self-affirmations to keep the users motivated, calming music for the salon purposes, provide 24/7 skincare consultation from a highly qualified cosmetologist via WhatsApp website for beautician training, standard online quizzes for the trainee beauticians to get prepared for the exam aligned with the TVEC syllabus. This research paper highlights the motivation, methodology (Agile), implementation (FastAPI, React, React JS Query, fine-tuned QWEN 2.5 0.5B-Instruct AI model), and evaluation (via Weights & Biases). All objectives were met. The AI chatbot achieved 80% accuracy rate based on evaluation using Weights. These results confirm that Bliss2Glamour successfully combines educational content, AI technology, and holistic care into one user-friendly system.

***Keywords* — artificial intelligence (AI) chatbot, learning management system, skincare advice, calming music, self-affirmation**

I INTRODUCTION

Practical and vocational knowledge in the beauty industry lacks accessibility, personalisation, and combining with modern emerging technologies. Bliss2Glamour considers these gaps through a web-based platform targeting NVQ Level 4 novice beauticians, qualified lecturers, and beauty enthusiasts. This platform offers TVEC syllabus-aligned modules with quizzes, a personalised skincare AI chatbot, a calming music playlist for salon ambiance, and motivational support. The essential feature is the 24/7 skincare consultation from a qualified cosmetologist through WhatsApp.

The chatbot in *Bliss2Glamour* is fine-tuned to provide personalized skincare routines based on user-input skin types. It offers trusted advice without relying on camera-based analysis, ensuring accuracy and privacy. It also complements the LMS by answering beauty-related queries around the clock.

In the context of *Bliss2Glamour*, the LMS provides syllabus-aligned theory and practical lessons for NVQ Level 4 [2] beautician trainees. It includes interactive quizzes, downloadable materials, and structured modules based on TVEC standards.

Developed under Agile methodology, the system closes the gap between the current commercial systems that mainly focuses on product marketing rather than knowledge development

II LITERATURE REVIEW

The objective of the researcher is to study and learn about the existing systems which cover different areas, such as existing Learning Management Systems (LMS) [3] in Vocational Training, Use of Gamification in Education such as Quizzes, AI chatbots in Skincare and Beauty, User-centric features like calming music integration and Overview of AI in skincare, Live WhatsApp skin consultations with a qualified cosmetologist. For this developed system, the researcher grabbed sources from Academic scholarly journals/articles, TVEC guidelines and empirical studies on chatbot Innovation. The researcher gained vast knowledge of the existing systems in the beauty industry after conducting this deep case study. The observer also recognised the gaps in existing systems and approaches to address them through the suggested project. After the Literature review, the researcher gained insight into building a creative and all-in-one educational e-platform that motivates budding beauticians while offering superior services for our end users seeking personalised skincare routines for the entered skin type.

This analysis aims to compare the current systems in the beauty industry, related to the developed system. A common feature of the existing systems was they only focused on their brand promotion, unlike Bliss2Glamour system. Especially to pursue an NVQ Level 4 beauty

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exam the researcher spent over one hundred thousand LKR (280 GBP). This is far more expensive for our aspiring beauticians who have financial struggles. The implemented system fills this gap by providing valuable services to freshly trained beauticians and offers ultimate free services for beauty enthusiasts who experience cash flow issues. The researcher focused on the people who do not get a chance to visit a salon. This system will fulfil the requirements of customers who seek a calming ambience by providing a playlist of relaxing music to use during their treatments or facials. Recognising the importance of motivation, the researcher includer some interesting self-affirmation as a tool to boost the users.

Most existing systems are aimed at only marketing products or just providing general courses. For example, Skinchat. Ai's chatbot gives advice on products but unspecified on beautician training. Bliss2Glamour is unique because it provides everything at once such as learning materials, exam quizzes for NVQ tests, an AI chatbot for face and skin-care advice, calming music, self-affirmations, and expert advice on WhatsApp too. It does not sell any brand and is expressly developed for beauty students even if they could afford expensive training to learn easily and comfortably.

Bliss2Glamour combines multiple technologies through a single platform, while most recent systems can only accommodate a single use. While technically combining a React front end and FastAPI back end to provide asynchronous and scalable work, its functional model is powered by a Qwen 2.5 AI model fine-tuned on skincare education and not on commonly used chatbot tools pre-built like Chatling.ai or even pre-built AI models. While different from AR-based solutions like Modiface utilizing camera-based face and skin analysis, Bliss2Glamour does not incorporate camera-based face and skin analysis and relies on user inputs for privacy and accuracy. The system itself is also further containerized with Docker and GCP-based deployment through a virtual machine utilizing Portainer.io and Docker Hub for professional-level DevOps integration and cloud scalability.

Existing Systems	AI chatbot	AI-image processing	Calming music	24/7 available live chat	Learning materials (Theory & Practical Paid)	Online quiz	Self-affirmation	Chemical ingredients which are suitable for the user's skin type	Free services	Promoting their brands
https://interview.lovi.care/quiz/	✗	✓	✗	✗	✗	✗	✗	✗	✓	✓
https://app.skinchat.ai/demo/chat/	✓	✓	✗	✗	✗	✗	✗	✗	✓	✓
https://skinanalysis.pro/	✗	✗	✗	✗	✗	✗	✗	✗	✗	✓
https://www.salonliyo.com/	✗	✗	✗	✓	✗	✗	✗	✗	✗	✓
https://www.britishcosmetics.lk/	✗	✗	✗	✓	✗	✗	✗	✗	✗	✓
https://janet.lk/	✗	✗	✗	✗	✗	✗	✗	✗	✗	✓
https://dreamronbeautycollege.com/	✗	✗	✗	✓	✓	✗	✗	✗	✗	✓
https://lk.spaceylon.com/	✗	✗	✓	✗	✗	✗	✗	✓	✗	✓
https://www.ihbeducation.com/	✗	✗	✗	✗	✗	✗	✗	✗	✗	✓
https://www.robofy.ai/app/	✓	✗	✗	✓	✗	✗	✗	✗	✓	✗
https://www.loreal.com/	✗	✓	✗	✓	✗	✗	✗	✗	✗	✓
https://www.provenskincare.com/	✗	✗	✗	✗	✗	✗	✗	✓	✓	✓

Fig 2.4 Research Gap

Fig 2.1 shows the comparison of the existing systems identified by the researcher.

III METHODOLOGY

A. Agile Methodology and Development

The methodology selected by the researcher was the Agile methodology [4] to implement the Bliss2Glamour system due to its flexibility, and the requirements were not fixed. Agile methodology allowed the researcher to break the entire system into manageable parts called sprints. It was easy for the researcher throughout this entire project because after each sprint the researcher received feedback from the supervisor, then started to integrate with other sprints if they work together without any problem.

B. Project Plan

In this phase the researcher created the WBS, Gantt chart and a Trello Board to keep track of the tasks. Especially, to track To Do, In Progress, Done. Although no formal budget was required, the researcher invested in Google Pro+ subscription to train the AI model with a powerful GPU and considered the costs for hosting and domain registration.

C. Requirement Gathering

The researcher did a systematic Literature Review, to get secondary data related to this developed system. It was very useful to get an idea about the existing systems and the technologies they have used to implement those systems.

Moreover, the researcher conducted Market Research to get the primary data from 195 users by mentioning the features of the developed system.

Fig 3.4 Feedback from the users

Fig 3.4 illustrates the summary of the detailed market research conducted and distributed to 195 participants, including professional beauticians, trainee beauticians, and beauty-conscious people. The analysis of this market research proved that most people lacked access to quality beauty study materials, trusted skincare advice, and affordable exam preparations

After conducting the market research, the researcher gained valuable insights into which features should be developed for the system. For this reason, as part of the sampling process adopted here, the snowball sampling process was adopted by the researcher because getting in touch with the target market for beauty industry is most effective. The questionnaire was spread by the researcher among acquaintances known personally, thereafter such known acquaintances had spread among friends. This method was beneficial as a method of getting responses quickly because it does not include any limitations such as sampling bias, reduced randomness and possible overrepresentation among target user populations.

D. . Project Design

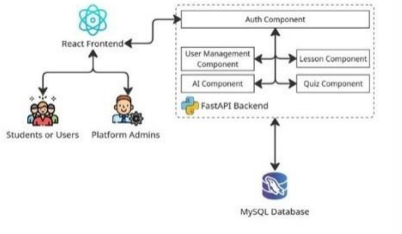


Fig 3.5 Software Architecture Diagram

Fig 3.5 illustrates the Software Architecture Diagram; it depicts how the Bliss2Glamour system's frontend and backend work.

The system has 2 main types of users, students/users who will use the platform to get the service and Platform admins who will manage the lessons, quizzes. These users interact with the system through a web interface built using React. Then the front end gets connected to the backend, which is built using FastAPI (Python).

In addition, the researcher designed wireframes, flowcharts, pseudo codes and ER diagrams to get an idea about this developed project and about the database.

E. Technologies and Tools used

The development of Bliss2Glamour involved a modern and efficient tech stack. The front end was built using React JS with Tailwind CSS for styling. Form handling and validation were done using React Hook and Zod. Swagger for API documentation. The backend was developed in FastAPI (Python 3.10), with SQLAlchemy ORM to interact with the database and Pydantic for schema validation. JWT tokens were used for authentication and role management. The system was containerized using Docker and Google Colab Pro+ were used to train the AI model with a powerful GPU. Excalidraw was used to design low fidelity wireframes. Weights & Biases (WandB) was used to monitor the AI chatbot's accuracy.

The final system was deployed using Docker Hub [5] for image management and Portainer.io as the visual UI , used manage the containers. Hosting was conducted on a Google Cloud Platform (GCP) Virtual Machine with Portainer.io installed, for deploying both the frontend and backend services of Bliss2Glamour.

IV RESULTS AND DISCUSSION

A. Results

The developed system successfully integrated all proposed modules. The AI chatbot gave an 80% accuracy rate based on its interaction with the users, evaluated through Weights & Biases visual dashboards.

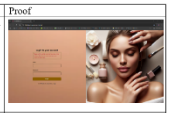
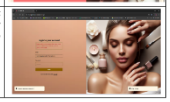
TestCase_ID	Pre-Conditions	TestCase_Title	Test_Description	Input_Value	Expected_Result	Proof
TC01	Admin must be registered and know their username and password.	Admin Login	1.1 Navigate to Login Page	Paste the URL and click enter.	Login page should be visible. PASS	
TC01	Admin must be registered and know their username and password.		1.2 Enter valid admin credentials.	Valid email & password.	Admin Dashboard should be visible PASS	
TC01	Admin must be registered and know their username and password.		1.3 Enter invalid admin credentials.	Enter Invalid password.	Error: "Incorrect username or password. Failed to login." PASS	

Fig 4.2 Manual test cases

Fig 4.2: illustrates the manual testcases done by the researcher to identify the functionalities of the system and to make sure they are working without any errors.

B. Discussion

Bliss2Glamour system achieved a reliability rate of around 85% and AI model accuracy of 80% , based on the evaluation done by using the Weights & Biases and from all the testing such as User Acceptance testing and from manual testcases. When considering all the main modules including AI chatbot, lesson delivery, quiz assessment, and WhatsApp integration indicates the system is stable, functional, and user-friendly.

The AI chatbot [6] [7], powered by the QWEN 2.5-0.5B (which has 500 million parameters) model, demonstrated 80% success rate in providing trustworthy and relevant responses during the test case evaluations. While this is a commendable outcome for a newbie in the technology sector, the accuracy did not reach 100% due to a combination of technical constraints and limited resources like lack of experience of using high level software tools and the technology stack. Especially, the main reason was that the researcher was a novice in the field of deep learning AI model fine tuning, several challenges had occurred.

C. User Feedback Gathering

The researcher selected a qualified beautician, and she is also a lecturer in the beauty industry who evaluated the system and discussed the areas that the researcher should improve to make it a better system. After the discussion the researcher got positive feedback and here is the link of the discussion.

The researcher was able to get responses from 50 respondents. Majority of the respondents were from the Beauty industry and the rest of them were beauty enthusiasts and trainee beauticians.

All the respondents mentioned that this system was highly beneficial for the trainee beauticians who face the NVQ Level 4 beauty exam, the government has declared to do this exam an online onsite examination for the first time. So, for them this system would exceptionally be useful to practice before facing for the exam. After that, the researcher implemented the changes based on user feedback collected during the evaluation stage.

V CONCLUSION AND FUTURE WORK

The developed system is a website with AI-powered educational LMS developed to encourage the NVQ Level 4 trainee beauticians, lecturers who are conducting lectures at any beauty academy for the NVQ students, and the beauty enthusiasts. Bliss2Glamour LMS consists of a syllabus aligned with the TVEC standards including interactive quizzes, the AI chatbot trained using Distillation method for skincare advice [15], self-affirmations to uplift the users, calming music for the salon purpose to play during any treatments like facials, massage treatments or any other treatments, which a user needs to stay with a peaceful mindset and real-time free skin consultation via WhatsApp with a Licensed cosmetologist.

This was an immediate achievement of all set objectives within a narrow time frame and was a great source of inspiration motivating further refinement and future improvement of this evolved system.

This application not only meets all the promised objectives but also offers educational, emotional and technological support to its users.

The following refinements are recommended as future work:

- Develop a cross-platform mobile application using React Native or Flutter for broader reach.
- Localize the UI and content which supports Multi-languages like Sinhala and Tamil as a support for the target audience.
- Upgrade the self-affirmation section by adding the text-to-speech feature, so when the beauticians are tired or unable to read, they can hear it.

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