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Elevate-IQ: Connecting Talent with Opportunities

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ABSTRACT: Elevate-IQ is a comprehensive platform with a mission to enhance employability among Indian youth by aligning educational outcomes with industry demands. The platform empowers students by providing them with the necessary skills and knowledge to thrive in the rapidly evolving job market.

Elevate-IQ focuses on creating a seamless connection between students, colleges, and companies, facilitating skill development, project showcasing, and employability. The platform gives underdog students visibility beyond their college environment by showcasing their work and helping them get recognized by potential recruiters

KEYWORDS: Elevate-IQ, GameIT , Jobit, Whapping, Skillhive, Bytebrief , Career Compass.

I.INTRODUCTION

Elevate-IQ is a holistic digital platform that aims to uplift the employability of Indian youth through aligning education outcomes with the demands of the job market. This initiative empowers students to succeed in a constantly changing professional world by creating seamless connectivity between students, educational institutions, and industry stakeholders.

Through Elevate- IQ, the process of skill development occurs, student projects are exhibited, and access to employment opportunities becomes possible.

The platform is designed to engage students through interactive tools such as quizzes , while also providing access to the latest technology news and educational resources. This ensures that users remain informed about current trends and developments in the tech industry. Elevate-IQ also emphasizes career opportunities by enabling students to present their project portfolios to potential recruiters, thereby increasing their visibility beyond traditional college environments.

Elevate-IQ comprises several key components, including Skillhive, a social-like platform for project showcasing; Gameit, a fun learning tool featuring quizzes; Bytebriefs, which aggregates software-related news; CareerCompass, a resource for navigating career paths in tech; Jobbit, a video learning hub; and Whapping, an event tracker for hackathons and competitions.

Together, these features create an engaging ecosystem that not only prepares students for their future careers but also fosters connections among students, educators, and industry professionals.

Core Features:

- **Student Engagement:** Interactive tools like quizzes and real-world project submissions help students stay engaged while developing their skills.
- **Knowledge Enhancement:** By offering the latest technology news, short educational videos, and learning roadmaps, the platform ensures that students stay updated with current trends.
- **Career Opportunities:** With a focus on showcasing project portfolios and providing career guidance, Elevate-IQ connects students directly to job and internship opportunities.



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- Recruiter Empowerment: Recruiters gain access to a diverse pool of talent through the project portfolios and can identify candidates with proven skills

II.SYSTEM ARCHITECTURE AND IMPLEMENTATION

Elevate-IQ follows a modern web application architecture, leveraging the strengths of Next.js for both frontend and backend development. The high-level architecture can be visualized as follows:

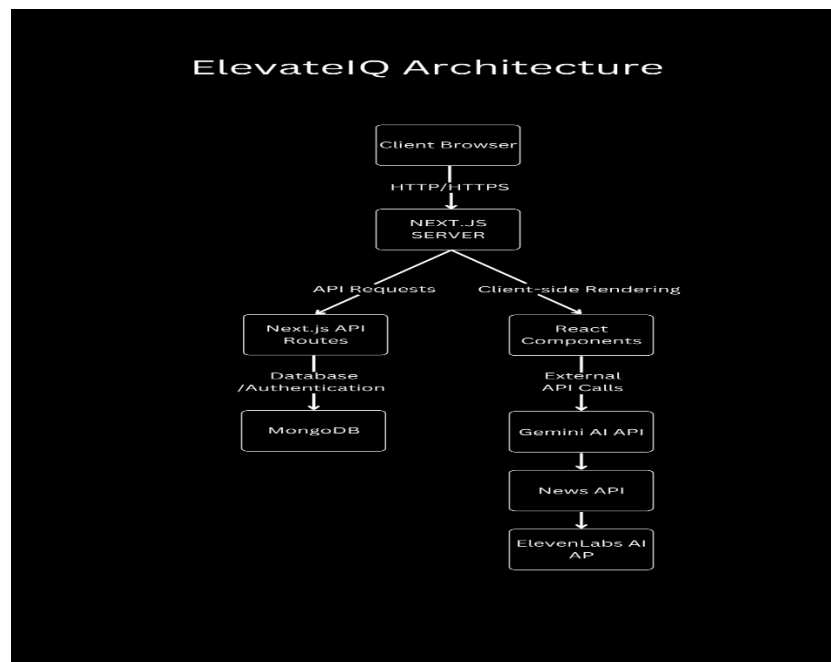


Fig 1: Elevate-IQ Architecture

User Interface Design:

The user interface of Elevate-IQ is designed to be intuitive, responsive, and accessible. It features a responsive layout using React's component-based architecture for optimal viewing across devices, intuitive navigation with a clear menu structure and breadcrumbs powered by Next.js's file-based routing, and consistent styling through shared React components and CSS modules

Tech Stack Overview:

MongoDB: Stores user profiles, authentication details, and manages secure sessions.

Gemini AI API: Powers dynamic quiz generation tailored to user-selected topics and adjusts content difficulty.

ElevenLabs API: Facilitates AI-driven virtual interviews for improving interview skills.

News API: Fetches and curates real-time industry news and updates.

Frontend (Next.js): Builds the frontend with server-side rendering, SEO optimization, and fast page loads.

Styling (Tailwind CSS and Material-UI): Provides responsive, custom layouts with Tailwind CSS and pre-designed components with Material-UI for a modern interface.

Elevate-IQ has 6 components, those are:

1. Skillhive: "Instagram for Projects"

- Functionality: A social-like platform where students and colleges can post project work, and companies can view and assess them.

- Three Accounts:

o Student: Can upload project portfolios, showcase skills, and share their academic or extracurricular projects.



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- o College: Can post collaborative academic or student projects, helping showcase institutional talent.
- o Company: Can explore and review projects, directly connecting with students or institutions if they find the project promising.
- Authentication: MongoDB is used for account creation, login, and maintaining user sessions, ensuring secure access for all three user types.
- Profile Management: MongoDB stores and manages profile data, project details, and interactions across the platform.
- Project Interaction: Companies can interact with project creators, request collaboration or further information on specific projects.

2. Gameit: "Fun Learning Platform"

- Quiz Section: Focuses on assessing and reinforcing concepts through quizzes tailored to the topics chosen by students.
- Topic-Based Learning: Users can select topics of interest, and Gamit will generate quizzes challenges based on those topics.

2.1. VirtueHire: "AI Interviewer"

In this project, we developed an AI system named Eric using ElevenLabs AI . The primary role of Eric is to function as an AI interviewer within the context of my Next.js TSX application. Eric is designed to simulate the process of a job interview by interacting with users in a conversational manner, mimicking the experience of an actual human recruiter. The AI is programmed with specific prompts to ask relevant interview questions based on the user's background, skills, and experiences. It is tailored to assess the user's responses, providing feedback and further questions to evaluate their suitability for various roles. The system integrates seamlessly into the web application, offering users a valuable tool for mock interviews and improving their interview preparation.

By leveraging cutting-edge AI technology, Eric aims to provide personalized and efficient interview simulations, helping users enhance their interview skills in a controlled environment.

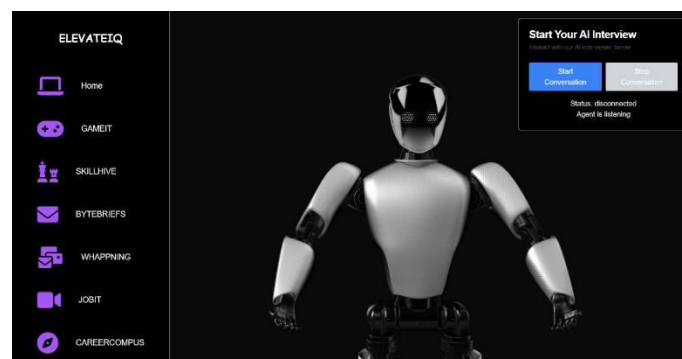


Fig 2: Eric- AI interviewer

Features Implemented:

- Dynamic Quiz Generation: Uses AI to dynamically generate questions and options for quizzes. Topics included in various domain that are subjected to computer science fields.
- Quiz Mechanics: Tracks progress with a question counter. Displays feedback for correct and incorrect answers.
- Result and Replay Features: Displays the total score and feedback at the end of each quiz. Allows users to replay quizzes for improved learning.
- User-Friendly Interface: Dynamic quiz dialogs with engaging animations and hover effects. Design that adapts for easy use on different gadgets.

3. Bytebriefs: "Software News and Updates"

- Purpose: Provides students with curated, software-related news updates, helping them stay informed about the latest industry trends and technological advancements.
- News API Integration: Leverages a news API to pull in tech-related articles and filter them to provide only relevant information (e.g., new programming languages, frameworks, major software releases).



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- Content Curation: Ensures that the content is up-to-date and relevant, avoiding general news and focusing on what's most beneficial for software enthusiasts.
 - Search and Filter: Users can filter news by technology or topic, making it easier to focus on specific areas of interest
- Features Implemented:
- News Fetching and Display: Integrated News API to dynamically fetch articles related to technology, engineering, and the software industry. Filters articles to ensure relevance by focusing on fields like "computer science," "engineering," "companies," and "technology."
 - Interactive User Interface: Articles displayed in a responsive grid layout. "Show More" links allow users to read full articles on the source website.
 - Error Handling: Displays user-friendly error messages in case of API failures or data fetching issues.
- Technologies used are React and Next.js for Frontend and News API for fetching real time articles.

4. CareerCompass: "Role and Skill Navigator"

4.1. Road Map for Careers

- Career Directory: Provides detailed insights into various roles in the software industry, including job responsibilities, required skills, and potential career paths.
 - Learning Roadmaps: Offers clear, step-by-step learning paths for different software career roles (e.g., front-end developer, data scientist), guiding users on how to acquire necessary skills.
 - Skill-Building Resources: Recommends courses, tutorials, and certifications to help users build and improve on required skills for their desired roles.
 - Job Trend Analytics: Displays trends in the job market, helping students align their learning with what's currently in demand (e.g., emerging skills or technologies).
- Technologies used are React and Next.js for the frontend.

4.2. BotX : "AI Assistance Bot"

In this project, we developed an AI system using ElevenLabs AI . The role is to function as an AI assistant within the context of my Next.js TSX application. This bot is designed to assist the user for various problem statement that arises in specific technology. These domain specific AI assistants are advanced technologies like machine learning, natural language processing and data analysis to niche requirements.

The AI bot is programmed to assist for specific technologies like software development, cybersecurity, cloud computing, Internet of Things(IoT), robotics and automation, data science and analytics and many more to user.

5. Jobbit: "Video Learning Hub"

- Short, Fun Educational Videos: A repository of short videos uploaded by educators or industry experts, aimed at explaining complex software topics in a simple, engaging way.
- Firebase Video Integration: Videos are stored in Firebase, and the front-end pulls these videos dynamically, ensuring smooth streaming and access.
- Visual Learning: Focuses on providing important software-related knowledge in bite sized, visually engaging formats (e.g., explaining algorithms, frameworks, or coding best practices).
- Topic Coverage: Videos can cover various tech topics, from basic programming concepts to advanced development methodologies.

Features Implemented:

- Advanced Scrolling: Integrated vertical scrolling with a scroll snap feature for seamless navigation between videos.
- Scroll Snap Type: "y mandatory" ensures each video section snaps into view as the user scrolls.
- Video Content Delivery: Embedded YouTube videos covering a range of technical topics. Videos are styled with responsive frames and smooth loading.
- Sidebar Navigation: Includes a Sidebar component to allow easy access to other sections of the platform. Ensures consistency in navigation across the platform.
- UI/UX Design: Responsive layout ensuring compatibility across devices.

6. Whapping: "Hackathon and Event Tracker"

- Purpose: A real-time event listing platform, helping students track upcoming hackathons, coding competitions, and relevant industry events.



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- Event Listings: Provides details such as event name, description, date, location, and registration information, giving students easy access to opportunities.
- Search & Filter: Users can filter events based on criteria like location, type of event (e.g., hackathon, job fair).

Features Implemented:

- Event Listings: Displays detailed information about both upcoming and ongoing events, including: Event banners and titles. Event descriptions highlighting key details like prize pools, objectives, and schedules and Registration links for each event.
- Interactive Google Maps: Embedded Google Maps for every event, showcasing exact locations.
- Registration Integration: Direct registration links provided for each event, ensuring smooth user interaction.
- User-Friendly Layout: Clean, responsive design for viewing multiple events. Event sections structured for easy navigation..

Technologies used: Front-end built with React and Next.js for responsive and interactive AI.

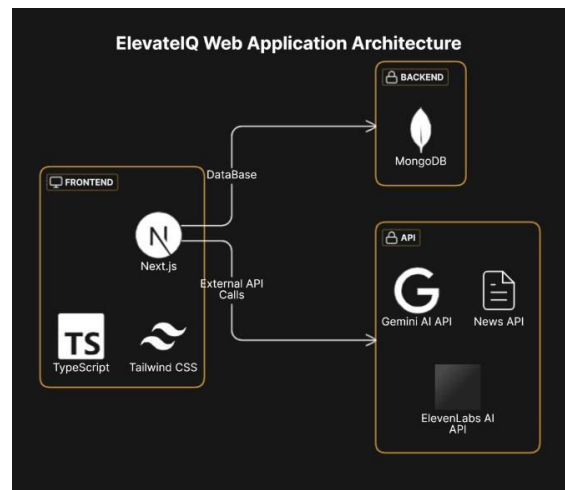


Fig 3: Elevate-IQ Web Application Architecture

III.RELATED WORK

1. “Game-Based Digital Quiz as a Tool for Improving Students”, Engagement and Learning in Online Lectures Researchers have highlighted several challenges and barriers associated with online teaching such as reduced motivation for active learning ,limitations in the interaction between student and instructor and issues with software compatibility . Most students do not pay attention to online lectures and videos and only focus on what needs to be done. As the number of students taking online courses increases, interaction between students and professors becomes a big problem and email is not a good solution. Kahoot, a game-based learning platform, was released to the public in 2013 and many studies have been published on the effectiveness of learning with Kahoot. The most prominent of these studies is Kahoot! Effectiveness of learning, classroom ability, student and teacher attitudes, and student stress. Many problems such as work problems, seeing questions and answers in class, time pressure, fear of failure, and stress caused by grades were also identified. However, there is little research on the use of students' responses to games outside of the physical classroom.

2. “The Future of Hackathon Research and Practice”, They organized a workshop at the Lorentz Centre . They brought together hackathon researchers and practitioners from various disciplines, including software engineering, high-performance computing, information systems, astronomy, geology, physics, and organizational sciences. During the five-day workshop, the participants engaged in in-depth open discussion formats similar to interdisciplinary discussion formats, such as the World Cafe , regarding event organization and under-researched areas. The workshop participants collected issues and shared resources, then prioritized these topics based on research potential and interdisciplinary



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collaboration. They continued collaborating online after the workshop to refine these areas and research directions. This paper presents the result of the multidisciplinary analysis of these discussions on hackathon research and practice.

3. “Online Training and Placement Management System”, There are mainly three types of users they are administrator, student and HR. Administrator is the owner; he/she gets the highest priority over other users. Different duties of the admin include organizing, approving and sending information about placements to students. Administrators can view and approve multiple applications. Students can register and view content. The placement officer can login through HR section view the details of the HR’s, placed students, and training details.

4. “A study of the relationship between students’ engagement and their academic performances in an eLearning environment”, The concept of online education is gaining ground in higher education and online enrollment has increased significantly in recent years. According to the literature, one of the key elements of effective online learning is student engagement. In short, student engagement needs to be measured effectively to determine student performance and success. The aim of this study is to understand the relationship between student engagement in online modules and their overall performance by analyzing student activities in online learning modules. Based on the existing literature and research data, three indicators were defined and evaluated as relevant in the context of the present research to assess student engagement in the module. These are (i) educational activities; (ii) significant levels of training; and (iii) activities requiring a platform.

5. “Technology and Society”, This comprehensive article explores the interaction between humans and technology, emphasizing the development of science and technology in all areas of human life. This article first presents the widespread impact of technology, then examines the impact of current technological developments on social, behavioral issues, justice, data science, human-computer relations, legal models, and new models. This study advances the understanding of the interaction between technology and humans by conducting a detailed literature review, identifying gaps in research, and examining positive and negative results from real research data. Through this survey, we hope to raise awareness, encourage more research, and promote responsible technology.

6. “Gamified e-quizzes on student learning and engagement”, This study investigated differences in student performance and found relationships between three intervention groups in a research classroom using two types of instructional interventions: traditional instruction with paper tests and games with electronic drug screening tests. Three types of gamified applications were used for gamified instruction: Socrative, Quizizz, and iSpring Learn LMS. The results of the instructional intervention and the evaluation of the lessons were obtained from test samples, post-test surveys, and personal interviews. The results suggest that the use of new e-exam applications and paper tests can be effective in assessing student performance, especially in the case of appropriate assessment when all topics are completed. Finding ways for teachers to use games or game content in the classroom can be a promising and innovative way to support students in learning strategy and competition.

IV.RESULTS

Elevate-IQ demonstrates significant potential as a comprehensive platform designed to bridge the critical gap between educational institutions and industry demands. The platform integrates innovative modules:

Skillhive: A repository for students to showcase their projects, fostering collaboration and industry feedback.

Bytebriefs: A dynamic component offering curated technical news to keep users informed of industry trends.

Gammit: An engaging gamification module that encourages interactive and fun learning experiences through quizzes.

CareerCompass: A career alignment tool that aids users in navigating pathways to achieve their professional aspirations.

Jobbit: A centralized job search portal where students can find internships, fresher roles, and job opportunities aligned with their skill sets. Jobbit provides personalized recommendations based on user profiles and connects them with potential employers.

Whapping: A real-time events hub that keeps users updated on technical workshops, hackathons, seminars, and industry-relevant events. Whapping fosters participation and skill enhancement through timely event notifications and seamless registration.



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The project incorporates modern technologies like Next.js and Firebase to ensure scalability, responsiveness, and ease of use. The unified design and focus on skill development directly address the employability gap, benefiting both students and industry stakeholders.

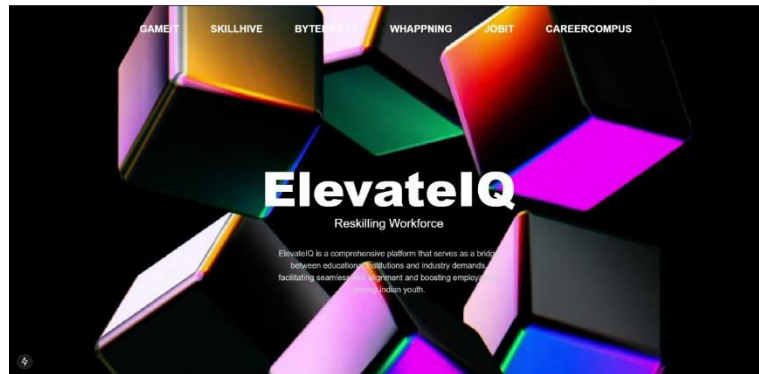


Fig 4: Elevate-IQ Web Application

V. CONCLUSION AND FUTURE ENHANCEMENTS

Elevate-IQ demonstrates a holistic approach to solving the employability challenge faced by Indian students. By leveraging advanced web technologies, it bridges the gap between academia and industry, creating a dynamic platform for skill-building and networking. Elevate-IQ stands out as a pioneering initiative in the realm of skill development and employability enhancement for Indian youth. By addressing the critical gap between traditional education and the dynamic demands of the job market, it empowers students with the tools and resources necessary to thrive in their careers.

The modular design ensures scalability, while the emphasis on user engagement fosters an interactive and impactful learning environment. Elevate-IQ is a promising step towards preparing Indian youth for the ever-evolving tech landscape.

Main Takeaways are:

1. Bridging the Skills Gap: Elevate-IQ effectively connects theoretical knowledge with practical skills, ensuring that students are not only academically proficient but also industry-ready. This alignment is crucial in a rapidly evolving job landscape where employers seek candidates with relevant, hands-on experience.
2. Interactive Learning Environment: The platform's gamified approach to learning—through quizzes, challenges, and engaging video content—makes education more enjoyable and effective. This method promotes active participation, which is essential for retaining knowledge and developing critical thinking skills.
3. Comprehensive Career Support: With features like CareerCompass and Jobbit, Elevate-IQ provides holistic career guidance that goes beyond mere job listings. It offers insights into various tech roles, required competencies, and pathways for skill acquisition, thus enabling students to make informed career choices.
4. Networking Opportunities: By facilitating connections between students, educational institutions, and industry professionals, Elevate-IQ fosters a community that encourages collaboration and mentorship. This network is invaluable for student's seeking internships, projects, or job placements.
5. Future-Ready Approach: The platform's commitment to continuous improvement—such as integrating AI for personalized learning experiences and enhancing data analytics—demonstrates its forward-thinking philosophy.

Future Enhancements are:

1. Artificial Intelligence Integration: Incorporate AI-based recommendations for personalized learning paths, project suggestions, and career guidance.
2. Advanced Gamification: Introduce badges, achievements, and competitive leaderboards to enhance engagement on platforms like Gammit and Skillhive.



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3. Mobile Application Development: Expand to Android and iOS platforms, ensuring accessibility for on-the-go users.
4. Enhanced Data Analytics: Offer insights to institutions and companies regarding student performance and emerging skills.
5. Collaborative Learning Features: Introduce peer-to-peer collaboration and group projects to enhance teamwork skills.
6. Partnerships: Collaborate with online course providers for integrated certifications and training programs.

REFERENCES

1. Krenare Pireva Nuci, Rabail Tahir, Alf Inge Wang, Ali Shariq Imran “Game-Based Digital Quiz as a Tool for Improving Students’ Engagement and Learning in Online Lectures” , Vol.09, pp. 91220 - 91234 , 11 June 2021 .
2. Jeanette Falk, Alexander Nolte, Daniela Huppenkothen, Marion Weinzierl, Kiev Gama, “The Future of Hackathon Research and Practice”, Vol.12, pp. 133406 - 133425 , 05 September 2024 .
3. Santhosh Kumar H, Srividhya V R , “Online Training and Placement Management System”, Vol.04, 2016.
4. Banoor Yousra Rajabalee , Mohammad Issack Santally, and Frank Rennie, “A study of the relationship between students’ engagement and their academic performances in an eLearning environment”, Vol.17, October 17, 2019
5. Ritika Sharma , “Technology and Society”, December 2023.
6. Zamzami Zainuddin, Muhammad Shujahat, Hussein Haruna, Samuel Kai Wah Chu, “Gamified e-quizzes on student learning and engagement”, Vol.145, February 2020.



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