SHRI VAISHNAV VIDHYAPEETH VISHWAVIDYALAYA,

INDORE

INTERNSHIP REPORT
2023-2024

A report submitted in partial fulfillment of the requirements for the Award of

Degree of

BACHELOR OF TECHNOLOGY

in

Computer Science & Engineering

by

Shreyas Kshire

20100BTCSDSI07297

Under the supervision of

Industry Mentor:

Mr. Hansraj Singh
C.T.O
All Soft Solution Private Limited
Indore

University Mentor:

Mr.Sumit Nigam
Assistant Professor
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(Duration: 7th February 2024 to April 2024)

Department of Information Technology

Shri Vaishnav Institute of Information Technology

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SHRI VAISHNAV VIDYAPEETH VISHWAVIDYALAYA, INDORE

SHRI VAISHNAV INSTITUTE OF INFORMATION TECHNOLOGY

2023-24

DECLARATION

I hereby declare that work, which is being presented in the Internship Report as the partial fulfilment for the award of degree of **Bachelor of Technology** in **Computer Science & Engineering** in the **Department of Information Technology** at **Shri Vaishnav Institute of Information Technology** of Shri Vaishnav Vidyapeeth Vishwavidyalaya Indore, is an authentic record of my work carried out under the Mentorship of **Mr.Sumit Nigam, Assistant Professor, Department of Information Technology**. The matter embodied in this internship report has not been submitted for the award of any other degree.

Enrolment Number

20100BTCSDSI07297 Student Signature

Date:

SHRI VAISHNAV VIDYAPEETH VISHWAVIDYALAYA, INDORE

SHRI VAISHNAV INSTITUTE OF INFORMATION TECHNOLOGY

2023-2024

INTERNSHIP APPROVAL SHEET

This is to certify that **Shreyas Kshire** enrolment number **20100BTCSDSI07297** has successfully completed his industrial internship starting from 7th February to April 2024 and has submitted the final report. His work has been found satisfactory and it is recommended to accept it as a partialfulfilment for the award of degree of **Bachelor of Technology, Computer Science & Engineering** of the **Department of Information Technology** at **Shri Vaishnav Institute of Information Technology** of **Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore.**

Internal Examiner **External Examiner**

Date: **Date:**

SHRI VAISHNAV VIDYAPEETH VISHWAVIDYALAYA, INDORE

SHRI VAISHNAV INSTITUTE OF INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

CERTIFICATE

This is to certify that **Shreyas Kshire (20100BTCSDSI07297)** has successfully completed his industrial internship, starting from 7th February to April 2024 and has submitted the final report. He has successfully completed this Internship under the Mentorship of **Mr.Sumit Nigam, Assistant Professor, Department of Information Technology** as a partial fulfilment of the degree of **Bachelor of Technology** in **Computer Science & Engineering** of the **Department of Information Technology** at **Shri Vaishnav Institute of Information Technology** of **Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore** during the semester **Jan – June 2024.**

Internal Mentor
Mr.Sumit Nigam

Head & Director
Dr. Anand Rajawat

SHRI VAISHNAV VIDYAPEETH VISHWAVIDYALAYA, INDORE

SHRI VAISHNAV INSTITUTE OF INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

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I also would like to thank all the people that worked along with me at Allsoft Solutions Limited. With their patience and openness, they created an enjoyable working environment. It is indeed with a great sense of pleasure and immense sense of gratitude, that I acknowledge the help of these individuals

I am highly indebted to Director and HoD **Dr. Anand Rajavat**, for the facilities and continuous support provided by them to accomplish this internship. I would also like to thank my faculty mentors **Mr.Sumit Nigam** (Internal Mentor) & **Mr. Hansraj Singh** (Industry Mentor) for their constructive criticism throughout my internship. I would like to thank them for their support and advice to complete internship in above said organization. I am extremely great full to my department's staff members and friends who helped me in successful completion of this internship.

Shreyas Kshire

20100BTCSDSI07297

Computer Science & Engineering

ABSTRACT

PaperTalks is an innovative project that leverages retrieval augmented generation technology to enhance the experience of academic research and paper writing. The core technologies used in this project include Next.js for front-end development, Pinecone for advanced search and recommendation systems, AWS S3 bucket for storage, Tailwind CSS for styling, Shadcn for dynamic color generation, and Hypercolor for visual aesthetics.

Additionally, Python is utilized for backend development and integration with Streamlit for data visualization and analysis. User authentication and authorization are managed through Clerk, providing a secure and seamless experience for users.

Furthermore, the project integrates LangChain for multilingual support and Drizzle ORM for database management, ensuring efficient data handling and retrieval. The main usage of PaperTalks is to facilitate chatting with PDFs, enabling users to extract, discuss, and analyze content directly from research papers and documents. This functionality streamlines the research and writing process, empowering users with innovative tools and technologies for efficient information exchange and collaboration.

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A BRIEF INTRODUCTION OF THE ORGANIZATION'S BUSINESS SECTOR

1. INTRODUCTION

Allsoft Solutions and Services Pvt Ltd, IBM Business Partner was started in 2000 having headquarters in the USA, with the establishment of three branches in India. Allsoft has been committed to providingthe highest quality and needs-based services to its clients, both locally and internationally. They offer IT consulting, Industrial Training Program in various technologies, Web Development and Cloud services as well. They believe in "Making of the era with professionals" in this highly competitive workplace. Their policy towards introducing new, on demand and emerging technology makes us competitive in the market as our goals are to provide the best possible value and to lead in our markets through service and innovation. Being one of the IBM trusted and certified business partners, they offer training in IBM technologies to provide students an exposure to the IBM tools also.

1.1 ADMITTANCE

As per the emergence of the digital era, the needs of the corporate world are changing. That is why, they swear to provide the technologies that are insanely changing our world.

1.2 IBM CERTIFIED TRAINERS

To provide the best training experience we are having our finest IBM certified trainers who will fill up brains with the knowledge of today's growing technologies and endow for the industrial world requirements.

1.3 SMART COURSEWORK

Their coursework is carefully planned to provide the real essence of knowledge to the trainees. They introduced an internship program that

gives you a chance to enhance your objective learning and integrates your knowledge with the theory learned in the classroom. The internship program has been a well-formed channel for generating a great pipeline for the team. They are generating the perspective of professionalism in our interns as they mold them from student status to professional status by introducing them to the live projects of the cooperative world. To boost your skills and get a chance to experience a formal process within a company for the first time and start your journey with them.

2. DEVELOPMENT

For us leading a product from concept to implementation along with customer satisfaction is the belief. Their solutions are not confined to products from a particular vendor or platform. But they render the services to vendors from different platforms. Based on the client's requirement, we design and deliver our products accordingly. We have strategic partnerships and domain expertise with most of the well-known names in the industry. They work on the principle that a product has to be faultless from the first stage of its designing. They offer a complete portfolio of software solutions for different services with better customer experience.

OVERVIEW OF THE ORGANIZATION

1. BRIEF HISTORY

Allsoft Solutions and Services Pvt Ltd, IBM Business Partner was started in 2000 having headquarters in the USA, with the establishment of three branches in India. Allsoft has been committed to providingthe highest quality and needs-based services to its clients, both locally and internationally. They offer IT consulting, Industrial Training Program in various technologies, Web Development and Cloud services as well. They believe in "Making of the era with professionals" in this highly competitive workplace. Their policy towards introducing new, on demand and emerging technology makes us competitive in the market as our goals are to provide the best possible value and to lead in our markets through service and innovation.

2. BUSINESS SIZE

The company is a small firm, which includes 15-20 employees, having a board of directors and hardworking people to run the organization.

Allsoft Solutions, Mohali

Registration Number is MO/FEB8091/A 702.

3. PRODUCT LINES

Other than working on different client projects the company has collaboration to IBM by which it provides students the opportunity to get connected to IBM and explore indifferent fields like:

- Artificial Intelligence
- Machine Learning
- IBM Cognos tool
- Full Stack Development

4. COMPETITORS

- INGram
- Learn Quest
- Teach Data
- Global Knowledge

5. SUMMARY OF ALL DEPARTMENTS

The company has many departments in which it is divided into. The departments are; HR department, Front-end developing, Back-end developing, Designing, Content Writing, Customer Service, Teaching Department. Each department is unique and yet co-related and interdependent upon each other. With the cumulative effort of each department a website or app is developed and made online for usage.

PLAN OF THE INTERNSHIP PROGRAM

1. BRIEF INTRODUCTION OF BRANCH OF DEPARTMENT

I was part of the Retrieval Augmentation System team during my technical internship. Our main focus was on enhancing the way information is retrieved and used. Specifically, we worked on developing systems that improve how computers find and present information to users.

Our team used various technologies like Python, TensorFlow, and PyTorch to build these systems. We also utilized cloud platforms such as AWS and Google Cloud to make our solutions scalable and efficient.

The aim of the internship was to provide hands-on experience to interns and teach them how to create smart systems that make finding and using information easier and more effective.

2. THE STARTING AND ENDING DATES OF INTERNSHIP

The internship started on 7th February 2024, and it ended on April 2024, I have completed 6 weeks in this organization.

3. NAME OF DEPARTMENT IN WHICH YOU OBTAINED TRAINING.

I received training in the Data Science division of the organization, which falls under the umbrella of development services provided by the organization. Initially, I worked with the Data Science team, focusing on frontend development fundamentals. Subsequently, I

received training from the backend development team, followed by the database development and maintenance team. Towards the conclusion of the internship, interns were organized into different teams to work on the final exit project, which centered around the generation of Retrieval Augmentation systems.

Table No. 1: Internship Program Plan

Week 1	Project Initiation.
Week 2 – Week 3	Planning
Week 4 – Week 5	Development.
Week 6– Week 7	Frontend Development.
Week 8	Testing.
Week 9	Documentation and Reporting.
Week 10	Presentation and Review.

TRAINING PROGRAM

1. DUTIES AND RESPONSIBILITIES PERFORMED

The internship program started on February 7th, 2024. This internship was a 6-week program which successfully ended in April, 2024. During this internship I was assigned various tasks and responsibilities. Over a span of three weeks, our team of Two developers collaborated on building a full-stack- Retrieval augmentation generation web application using Next.js for front-end development, Pinecone for advanced search and recommendation systems, AWS S3 bucket for storage, Tailwind CSS for styling, Shadcn for dynamic color generation, and Hypercolor for visual aesthetics.Python is utilized for backend development and integration with Streamlit for data visualization and analysis. User authentication and authorization are managed through Clerk, providing a secure and seamless experience for users.

Week 1: I start by getting everyone together to talk about what I'm doing, who's doing what, and what my goals are. I also begin looking into retrieval augmentation generation to get a better idea of what I'll be working on. Then, I figure out what I need for the project and divide tasks among the team. I also set up ways for everyone to talk and keep track of what I'm doing. I'll be using Next.js for building the website, Pinecone for smart search, AWS S3 for storing stuff, Tailwind CSS for making things look good, Shadcn for fancy colors, Hypercolor for cool visuals, Python for coding the backend, and Clerk for keeping things secure.

Week 2-3: I break down what I need to do into smaller tasks and make a list of everything I need to get done. Then, I pick out the most important things and figure out how long they'll take. After that, I plan out what I'm going to do in the first chunk of time, called Sprint 1, and decide who's going to do what. I use Next.js for building the website, Pinecone for smart search, AWS S3 for storing stuff, Tailwind CSS for making things look good, Shadcn for fancy colors, Hypercolor for cool visuals, Python for coding the backend, and Clerk for keeping things secure.

Week 4-5: I start building a simple version of the retrieval augmentation generation system, focusing on high school content. Then, I try it out and see what works and what needs fixing. Based on feedback, I make improvements to the system. Throughout all this, I use Next.js for building the website, Pinecone for smart search, AWS S3 for storing stuff, Tailwind CSS for making things look good, Shadcn for fancy colors, Hypercolor for cool visuals, Python for coding the backend, and Clerk for keeping things secure.

Week 6-7: I make the retrieval augmentation generation system even better, focusing on how it works and how it looks. I also add more features based on what people want. I test everything to make sure it's working right and make sure to write down what I've done. I'm using Next.js for building the website, Pinecone for smart search, AWS S3 for storing stuff, Tailwind CSS for making things look good, Shadcn for fancy colors, Hypercolor for cool visuals, Python for coding the backend, and Clerk for keeping things secure.

Week 8: I spend this week making sure everything is working perfectly and fixing any problems I find. I also get people to try out the system to see if they like it and make any final changes. Then, I write down what I've done and what changes I've made. I'm still using Next.js for building the website, Pinecone for smart search, AWS S3 for storing stuff, Tailwind CSS for making things look good, Shadcn for fancy colors, Hypercolor for cool visuals, Python for coding the backend, and Clerk for keeping things secure.

Week 9: I write up a report about what I've done and what I've learned. I include details about how the retrieval augmentation generation system works and what I found when I tested it. I also start getting ready to show everything to the people who wanted it in the first place. I'm using Next.js for building the website, Pinecone for smart search, AWS S3 for storing stuff, Tailwind CSS for making things look good, Shadcn for fancy colors, Hypercolor for cool visuals, Python for coding the backend, and Clerk for keeping things secure.

Week 10: I finish up the report and practice talking about what I've done so I can explain it to other people. Then, I show everything to them and listen to what they think. I use their feedback to make some final changes and then write everything down so the next group of people knows what I did. I'm still using Next.js for building the website, Pinecone for smart search, AWS S3 for storing stuff, Tailwind CSS for making things look good, Shadcn for fancy colors, Hypercolor for cool visuals, Python for coding the backend, and Clerk for keeping things secure.

LEARNING EXPERIENCE

1. KNOWLEDGE ACQUIRED

During my internship, I had the opportunity to dive deep into both the technical and non-technical aspects that contribute to the smooth functioning of organizations, particularly in the realms of frontend development and the diverse technologies utilized in full-stack applications. As a computer science student, I already possessed a foundational understanding of React and Tailwind CSS, which greatly facilitated my learning process during the internship. This prior knowledge allowed me to swiftly grasp the concepts presented and dive into more complex topics with ease.

One of the most valuable lessons I gleaned during this period was the significance of writing efficient code, particularly in web development and full-stack projects. Under the guidance of my mentor, I learned industry-standard coding practices such as minimizing unnecessary white spaces, utilizing appropriate line breaks, and avoiding code duplication. These practices not only ensure code readability but also enhance its maintainability in the long run. Moreover, I realized that effective coding practices are indispensable even when the code appears to be functioning correctly.

In the realm of full-stack development, I discovered the importance of holistic problem-solving approaches. This involves not only understanding the technical aspects but also assessing the broader context, including the project requirements, available tools and technologies, and data management strategies. My experiences with

college projects provided me with opportunities to hone my skills in writing maintainable code, a crucial aspect of full-stack development. These projects also allowed me to gain practical insights into managing large databases and employing efficient data extraction techniques, further enriching my understanding of the field.

2. SKILLS LEARNED

During my internship, I learned various skills and career-specific abilities. Some of those skills are listed below:

Project Management: Throughout the internship, I developed the ability to effectively organize my priorities and take ownership of assigned tasks. Weekly check-ins with my mentor allowed me to discuss achieved goals and set targets for the upcoming weeks, enhancing my project management capabilities, especially considering my relative newness to the field.

Technical Skills: I expanded my technical repertoire by working with a range of tools and platforms, transcending the confines of familiarity. Embracing platforms like Clerk, which was entirely new to me, exemplified my willingness to step out of my comfort zone and adapt to diverse toolsets, thereby broadening my technical expertise..

Teamwork: Interacting with a diverse array of colleagues exposed me to various work styles and personalities. This experience enabled me to refine my interpersonal skills and adapt my approach to collaboration accordingly. Engaging with team members both within and outside my department provided valuable insights into different work methodologies and fostered a more comprehensive understanding of effective teamwork dynamics.

Technical Skills: My work was not just limited to one tool but I used

different tools to work. I worked on different platforms like Clerk which was completely new for me. So, through the internship, I learned to come out of my comfort zone and work on various tools.

Teamwork: During my internship, I had the chance to refine my teamwork skills through diverse interactions. I encountered a variety of personalities and work styles among my colleagues, which presented opportunities for growth. I learned to adapt my own work style when necessary and actively engaged with team members from different departments. This allowed me to understand their perspectives, learn from their expertise, and contribute to a more cohesive team environment. Overall, the experience taught me the value of collaboration and how diverse teams can leverage individual strengths to achieve common goals

3. OBSERVED ATTITUDES AND VALUES GAINED

Self-Confidence: Accomplishing tasks and projects throughout the internship bolstered my self-confidence in my abilities and potential career paths. These achievements reaffirmed my belief in my capabilities and provided me with the assurance to tackle future challenges with confidence.

Goal Setting: the internship emphasized the importance of setting and achieving goals, fostering the development of goal-setting skills that are applicable in both my personal and professional life. Learning to set specific, measurable, achievable, relevant, and time-bound (SMART) goals has equipped me with a structured approach to accomplishing tasks effectively.

Work Ethics: I gained insights into the importance of work ethics in the professional realm. By observing and adhering to established work ethics standards, such as staying motivated, completing tasks promptly, and avoiding procrastination, I cultivated habits that contribute to a strong work ethic. These principles not only enhance productivity but also leave a positive impression on employers, underscoring the value of diligence and commitment in the workplace.

4. MOST CHALLENGING TASK PERFORMED

The most challenging task I encountered during the internship was implementing retrieval augmentation generation into our project. This involved comprehensively understanding the intricacies of retrieval methods, augmentation techniques, and integrating them seamlessly into our Next.js application. Handling diverse types of data, ensuring the accuracy of retrieval results, and fine-tuning the augmentation process presented significant challenges. Additionally, managing the complexity of integrating various technologies and algorithms for retrieval augmentation generation posed a substantial hurdle. Despite these challenges, successfully overcoming them not only expanded my technical skills but also deepened my understanding of information retrieval and natural language processing concepts.

STRENGTHS, WEAKNESS, OPPORTUNITIES, THREATS (SWOT) ANALYSIS

1. STRENGTHS

Positive environment is such a great strength of nay organization. In this kind of environment everyone feels energetic, and they can work efficiently. The organization always focuses of growth, and they train each of their employees to contribute towards the growth of the organization. There is no communication gap in between teams and department as there is direct access to everyone irrespective of the organizational hierarchy. The organization keeps the customers or end user's point of view (POV) their top priority while making any project.

2. WEAKNESS

The organization has small number of employees which restricts them to grab a greater number of projects. As the organization is small, the people in higher authority have to manage multiple responsibilities. The organization didn't provide any assets (laptop or desktop) to interns and we were asked to use our personal laptops. Even after spending more than a decade in the market, the organization hasn't grown more significantly.

3. OPPORTUNITIES

Diversification: As the organization falls under telecom industry but in recent years, they have established themselves in IT as well, they have diversified their product line. The organization is training its employees

with the new emerging technologies to keep itself relevant in the market.

4. THREATS

Since the organization asks the interns and newly joined employees to use their personal systems, this can cause a serious threat to the security of any project. There are various large-scale companies in the same market which attracts large number of projects and make it tough for such small-scale organization to get good projects. Employees leaving the organization after getting experience while working with the organization can be a threat to the productivity.

PROBLEM IDENTIFICATION AND SOLUTION

1. PROBLEM

Problem identification is crucial in any work environment, as it forms the foundation for problem-solving and organizational improvement. Regardless of whether one is addressing issues for clients, supporting problem-solvers, or uncovering new challenges, problems can vary widely in size, complexity, and difficulty. As a manager, effectively addressing these challenges is integral to achieving success within the organization.

Every organization encounters problems within its operational framework, underscoring the importance of proactive problem-solving. By prioritizing problem-solving initiatives, organizations can foster a culture of continuous improvement and innovation. Identifying and resolving issues promptly not only enhances organizational efficiency but also cultivates a collaborative environment where employees feel empowered to tackle challenges collectively.

Rapid change in technology: The rapid pace of technological change poses a significant challenge for small organizations, impacting their ability to adapt to evolving customer demands. Limited resources often hinder investment in and implementation of new technologies, while the rapid obsolescence of existing solutions further complicates matters. To address this challenge, small organizations must adopt proactive strategies such as prioritizing investments in scalable technologies, fostering a culture of innovation, and forming strategic partnerships to access specialized expertise. By embracing agility and flexibility, small organizations can navigate the dynamic technology landscape and effectively meet the needs of their customers.

Lack of new resources: The lack of access to new resources presents a significant obstacle for companies aiming to keep pace with rapid technological advancements. Without access to the latest resources, such as cutting-edge technologies and skilled personnel, companies may struggle to drive innovation and propel growth. This deficiency can impede the development of new products or services, ultimately hindering the company's ability to remain competitive in the market. To overcome this challenge, companies must prioritize investment in acquiring new resources, whether through strategic partnerships, talent acquisition, or technology adoption, to fuel their growth and adapt to the ever-changing landscape of the industry.

Lack of co-ordination between testing teams and developers: The lack of coordination between testing teams and developers is a common challenge in software companies, often leading to conflicts and inefficiencies. This tug of war between the two groups, or even among testing teams themselves, can result in delays and quality issues in product releases. To address this, companies must foster a culture of collaboration and communication, implementing effective channels for sharing information and aligning on project objectives. Encouraging cross-functional collaboration and shared ownership of the development process can help bridge the gap between testing and development teams, ultimately leading to improved product quality and faster delivery times

Project infrastructure: The absence of adequate project development infrastructure poses a significant challenge in meeting project budgets effectively. Without proper infrastructure in place, including tools, processes, and resources, teams may encounter difficulties in managing project costs and timelines efficiently. This can lead to cost overruns, delays, and ultimately impact the project's success. To address this challenge, companies should prioritize investing in robust project infrastructure, including project management tools, standardized processes, and skilled personnel. By establishing a solid foundation for

project development, organizations can enhance cost control measures and ensure projects are delivered within budget constraints

Lack of quality assurance: The lack of quality assurance, often exacerbated by the discord and non-coordination between testing teams, compromises the quality of the product. This conflict, frequently driven by time constraints and target fulfillment pressures, leads to rushed testing processes and inadequate attention to quality. Consequently, defects and errors may go unnoticed, impacting the overall product quality and customer satisfaction. To mitigate this challenge, organizations must prioritize fostering collaboration and communication between testing teams and other stakeholders. Implementing comprehensive quality assurance processes and allocating sufficient time and resources for testing activities can help ensure that products meet the required quality standards before release

Hardware & Software Issues: Hardware and software issues often present challenges for businesses, particularly concerning the lifespan and maintenance of technology. While it's common to assume that a PC will last four to six years, this overlooks the potential for costly repairs and obsolescence. Over time, hardware components may degrade, leading to performance issues or failures. Similarly, software may become outdated or incompatible with newer systems, necessitating updates or replacements. This can result in unexpected expenses and disruptions to business operations. To address these challenges, businesses should implement proactive maintenance strategies, regularly assess the condition of hardware and software, and budget for upgrades or replacements as needed. Additionally, exploring leasing or subscription models for technology can provide access to up-to-date solutions without the burden of ownership or the risk of outdated equipment

2. CONSEQUENCES

Due to this major problem of this company, the company's reputations among the customers to deal with new technological projects are hindering. Directly affects the co-operation and co-ordination of the other working department and create clashes among departments.

3. SOLUTION

Company should train their employees at their cost. So that company growth must be kept first. Involve users from the start of existing product refurbishment. Communicate the needs and expectations between the development and ideation teams. Create a prototype to confirm and/or refine final agreed-upon requirements. To ensure efficient project development, test and pre-production environments should be made available during the development, testing, and user acceptance testing (UAT) phases. Invest in a solid IT infrastructure upfront to create a better software development environment. Following a formal quality assurance process is imperative for a successful

3.1 Working flow

1. **Sign Up/Login Page**:
    - Users sign up/login via Google account, email, or phone number for authentication.
    - Verification code sent to email or phone for account confirmation.
    - Upon verification, users gain access to their personalized dashboard.

2. **Dashboard**:
    - Option to upload PDF documents directly from device or cloud storage.
    - Ability to create questions based on uploaded PDF content.
    - View and manage existing documents and associated question sets.

3. **PDF Upload**:
    - Simple upload process allowing users to select PDF files from their device.
    - Support for uploading PDFs from popular cloud storage platforms like Google Drive or Dropbox.
    - Automatic text extraction from uploaded PDF documents for question generation.

4. **Question Generation**:
    - Intuitive interface for users to create questions based on extracted PDF text.
    - Option to specify question types such as multiple choice, fill-in-the-blank, or short answer.
    - Automatic question generation based on key content within the PDF document.

5. **Answer Extraction:**
    - Seamless extraction of answers from the uploaded PDF document.
    - Users can review and edit extracted answers to ensure accuracy.
    - Ability to associate extracted answers with corresponding questions for clarity.

6. **Preview and Publication**:
    - Preview functionality allowing users to review questions and answers before publication.
    - Option to save question sets as drafts or publish them for respondent interaction.
    - Clear prompts and confirmation dialogs to guide users through the publishing process.

7. **Respondent Interaction**:
    - Respondents access published question sets via unique links provided by the platform.
    - User-friendly interface for respondents to answer questions based on PDF content.
    - Seamless submission process with confirmation messages upon completion.

8. **Viewing Responses**:
    - Comprehensive view of responses submitted by respondents in a tabular format.
    - Ability to review individual question-answer pairs for each respondent.
    - Analytical tools to track response rates and assess correctness of answers.

CONCLUSION

This internship at Allsoft Solutions has been an invaluable learning experience, providing us with new skills and insights into working with cutting-edge technologies within a well-established organizational culture. As a team, we successfully integrated various technologies and components to develop a cohesive full-stack web application. Each team member contributed to different aspects of the project, fostering clear coordination and collaboration. Through this experience, our ability to tackle analytical challenges has significantly improved, and we've become more aware of our strengths and weaknesses.

Utilizing Next.js 13 with AppRouter for routing, integrating Dnd-kit for interactive UI, and leveraging ServerActions for server logic, we ensured the robust development of our application. With TypeScript for enhanced codebase and Tailwind CSS for efficient interface styling, we delivered punctually on Vercel, deploying a PostgreSQL database facilitated by Prisma ORM. Additionally, visualizing problem statements enhanced our creative insights and fostered better understanding of datasets among technical and non-technical staff.

Participation in weekly team meetings and discussions on project challenges has nurtured a resilient attitude. Throughout the internship, we've enhanced our teamwork capabilities and developed a deeper respect for our teammates' ideas and suggestions. This program has elevated our software development skills and equipped us with knowledge of emerging technologies, preparing us to tackle future challenges in the industry with confidence and enthusiasm. We are grateful to everyone who contributed to this enriching experience, including our faculties and mentors

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