DELHI TECHNOLOGICAL UNIVERSITY

Established by Govt. of Delhi Vide Act 6 of 2009
(Formerly Delhi College of Engineering)
SHAHBAD DAULATPUR, BAWANA ROAD, DELHI-110042

PRACTICAL TRAINING DIARY

Name of the Student: Vivek Patwal
Branch: Information Technology
Year: IV
Roll No: 2K19/IT/153
Training Place (Name of the Organization): ADOBE
Training Started on: 27th May 2024
Completed On: 2nd August 2024

Name: Vivek Patwal

Branch: Information Technology

Year: IV

Roll No: 2K19/IT/153

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Name & Address of the Training Organization: ADOBE

Training Started on (Date): 27th May 2024

Completed on (Date): 2nd August 2024

Signature: 

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06-08-2024

Internship Completion Certificate

This is to certify that the following candidate with mentioned details was offered internship assignment with Adobe Systems India Private Limited and has successfully accomplished the Internship assignment.

Internship details are herein below:

Candidate Name	:	Vivek Patwal
Employee ID	:	308831
Position Title	:	Product Intern
Start Date	:	Monday, 27 May, 2024
End Date	:	Friday, 2 August, 2024

Disclaimer: Intern clearly understands the binding of the Employee Inventions and Proprietary Rights Assignment Agreement (EIPRAA) inked at the commencement of this internship program to continue to subsist after its cessation.

For Adobe Systems India Pvt. Ltd.

Harpreet Kaur

Harpreet Kaur
Director, Talent Acquisition, India

CONTENTS OF THE DIARY

Profile of the Organization ：Adobe Inc.

Adobe Inc., founded in 1982 by John Warnock and Charles Geschke, is a global leader in digital media and marketing solutions. Headquartered in San Jose, California, Adobe is renowned for its industry-leading software and tools that empower individuals and businesses to create, manage, and deliver extraordinary digital experiences. From creators and small businesses to global enterprises and nonprofit organizations, Adobe’s products serve a diverse customer base.
Adobe's product offerings are organized into several key areas:

1. **Creative Cloud**: This suite of applications is widely recognized as the industry standard for creative professionals, providing tools for photography, design, illustration, video editing, and more. Key products include Adobe Photoshop, Illustrator, and Premiere Pro, which are relied upon by professionals to produce high-quality digital content.
2. **Document Cloud**: Adobe revolutionized document management with Acrobat and the Portable Document Format (PDF). Today, Adobe Document Cloud remains the leading platform for viewing, editing, sharing, and signing PDF documents, empowering individuals and businesses to streamline workflows and collaborate efficiently.
3. **Experience Cloud**: This comprehensive suite offers businesses everything they need to design, manage, and deliver personalized customer experiences. Adobe Experience Cloud is designed to help companies drive growth through data-driven marketing, analytics, and content management.
4. **Adobe Express**: A user-friendly app that enables users to create standout content such as social posts, videos, flyers, and more, Adobe Express caters to individuals and small businesses looking for quick and easy design solutions.

Adobe’s commitment to innovation extends to **Generative AI**, with Adobe Firefly AI models designed to amplify creativity and productivity. By integrating AI seamlessly into its tools, Adobe enhances the user experience, making it easier for creators to achieve their goals faster while maintaining high-quality output.
Since its inception, Adobe has continuously broken new ground, from the launch of **PostScript** and **Photoshop** to the development of the **PDF** format and its entry into digital marketing. Adobe's history is rich with transformative milestones that have reshaped the creative and business industries.
With over 26,000 employees globally and a presence in major development hubs such as the United States and India, Adobe remains at the forefront of technological advancements in the creative and digital marketing spaces. Through its ongoing focus on creativity, productivity, and responsible AI development, Adobe continues to empower users and businesses to create, innovate, and succeed.

Profile of the Department/Section Where Training was Undertaken

The Creative Cloud (CC) department at Adobe plays a pivotal role in the company's mission to empower creators across industries. Creative Cloud is a comprehensive suite of tools and services designed to support graphic design, photography, video editing, animation, web development, and more. It enables creativity, collaboration, and productivity, providing users with industry-standard software like Photoshop, Illustrator, Premiere Pro, After Effects, and Adobe XD.

The department focuses on **innovation and product development**, ensuring Creative Cloud remains cutting-edge. Regular updates introduce new features, including AI-driven tools like Adobe Sensei, which enhance editing, organizing, and workflow automation. These innovations help users streamline their processes while offering enhanced creative capabilities.

Collaboration and cloud integration are central to Creative Cloud's design. Its cloud-based infrastructure allows seamless collaboration across teams and individuals, regardless of location. Multiple users can work on the same project simultaneously, access files from different devices, and store assets securely in the cloud. This flexibility supports both individual creatives and enterprise-level teams, making it easier to collaborate on projects and scale workflows.

Adobe's **learning and support** resources are another key aspect of Creative Cloud. The department provides a wealth of tutorials, community forums, and in-app guidance to ensure that users of all skill levels can maximize their productivity. This commitment to accessible education helps users get the most out of the powerful tools at their disposal.

A **customer-centric approach** is integral to the development process. The department prioritizes feedback from users, using it to drive updates and innovations. This ensures that the tools stay relevant and effective for a wide range of professionals, from photographers and designers to videographers and animators.

Lastly, the department ensures that Creative Cloud meets the needs of diverse industries. While it is widely used in entertainment, advertising, and design, Adobe also caters to sectors like education, business, and digital marketing. By offering powerful tools for creating visually compelling content, Creative Cloud supports creators in connecting with audiences across the globe.

In conclusion, the Creative Cloud department's commitment to innovation, collaboration, customer feedback, and cross-industry applicability solidifies Adobe's position as a leader in creative software, helping users bring their visions to life.

Important Things Learned Which are not concerned with curriculum

During my training at Adobe's Creative Cloud department, one of the most important lessons I learned was the value of **adaptability and continuous learning**. In the ever-evolving world of creative software, new tools, features, and updates are introduced regularly. This requires professionals to constantly adapt and improve their skill set. The training emphasized the need to stay up-to-date with the latest innovations in the field, ensuring that we remain competitive and proficient in using the most advanced techniques. This mindset of embracing change and committing to lifelong learning is critical for success in the creative industry.

Another key takeaway was the importance of **collaboration and teamwork**. Creative projects often require input from multiple team members with different skills and expertise. The training at Adobe highlighted how essential it is to communicate effectively, share feedback, and work seamlessly across departments to achieve the best possible outcomes. It became clear that successful projects are not only about individual talent but also about how well the team can collaborate and leverage each other's strengths. This insight reinforced the idea that creative success often thrives in environments where collaboration is prioritized.

Time management and efficiency were also crucial aspects of the training experience. In the fast-paced world of creative design and production, meeting deadlines and managing complex projects is a challenge. Adobe’s Creative Cloud suite provides a variety of tools to streamline workflows, organize assets, and automate repetitive tasks, making it easier to stay on track. The training helped me understand how to use these tools effectively to ensure that tasks are completed within the allotted time, without compromising the quality of the final output. This ability to balance quality with efficiency is an invaluable skill for any professional in the creative field.

Equally important was the emphasis on **creativity and problem-solving**. Throughout the training, I learned how to approach challenges with a creative mindset, whether it was finding innovative solutions to design problems or optimizing processes to improve efficiency. Adobe’s tools encourage experimentation, allowing users to explore different possibilities and create unique outcomes. The training reinforced that creativity is not just about designing visually appealing content but also about thinking critically and solving problems in new and effective ways.

New Testing Equipment/Process Equipment/New Methods Seen Which Are Not Covered in the Curriculum

During my training at Adobe's Creative Cloud department, I was introduced to several **new tools and technologies** that are not typically covered in the standard curriculum. These tools are vital for enhancing creativity, streamlining workflows, and improving the quality of digital content. One notable example was the **AI-powered features integrated into Adobe’s software suite**, particularly Adobe Sensei.
Adobe Sensei uses machine learning and artificial intelligence to automate tasks like image recognition, object removal, and auto-tagging, significantly speeding up creative workflows. This technology, which wasn't included in my curriculum, opened my eyes to the potential of AI in creative industries, enabling designers to focus more on the conceptual aspects of their work rather than on repetitive tasks.
Another tool that caught my attention was **Adobe Firefly**, a generative AI model designed specifically for creative professionals. Firefly allows users to generate content, such as images and design elements, based on simple text prompts, making it a powerful tool for ideation and content creation. This technology wasn’t something I had encountered in my formal studies but is rapidly becoming a game-changer in creative industries. I learned how it integrates seamlessly with other Adobe tools to offer a new way of enhancing creativity and productivity in design processes.
Additionally, I had the opportunity to work with **cloud-based collaborative features** within Adobe Creative Cloud, such as Adobe XD and cloud documents. These tools facilitate real-time collaboration on design projects across multiple users, even from different locations. While the curriculum primarily focused on individual design and creation techniques, these cloud collaboration features were introduced as a part of the training, demonstrating how modern design workflows increasingly require remote and collaborative solutions.
I also explored **advanced asset management systems** used by Adobe’s Creative Cloud team, such as Adobe Bridge and Adobe Stock. Adobe Bridge serves as a digital asset manager, helping creative professionals organize, view, and batch-edit their assets efficiently. It was particularly useful for managing large design projects with many assets, which isn't usually addressed in the curriculum, but is essential in professional environments with high-volume content creation.
Finally, I was introduced to **integrated customer feedback tools** used to measure user experience and design effectiveness. These tools allow designers and companies to test their products in real-time with end-users, gathering insights on how their creations are received. This process was unfamiliar to me in my formal studies but proved to be a valuable insight into the continuous improvement cycle in creative production. The ability to gather and implement user feedback into the design process can significantly enhance the final product and user satisfaction.

Practices followed in the industry

During my training at Adobe's Creative Cloud department, I observed several key industry practices that contribute significantly to the company's success in creative software development.

One major practice is **collaboration and integration across tools and platforms**. Adobe’s Creative Cloud suite, which includes applications like Photoshop and Illustrator, is designed for seamless integration with cloud-based storage and collaboration tools. This enables users to work on projects from anywhere and share assets in real-time, making it easier for teams to collaborate, even across different locations. This practice ensures smooth workflows and high productivity, crucial in the fast-paced world of design and content creation.

Another important practice I learned about is Adobe’s approach to **continuous software updates and feature enhancement**. Adobe follows an agile development process that allows for regular updates and the introduction of new features based on user feedback. This ensures the tools remain cutting-edge and responsive to the changing needs of users. By frequently updating their software, Adobe helps users stay competitive by providing them with the latest and most effective tools for their creative projects.

A key focus of Adobe’s operations is **customer-centric design**. The company places great emphasis on understanding user needs through research, data collection, and feedback. This ensures that their products are not only powerful but also intuitive and accessible to users of all skill levels. By focusing on user experience, Adobe has maintained its position as the leading creative software provider for both beginners and professionals.

Additionally, **data security and privacy** are central to Adobe’s practices. As more creative work shifts to cloud platforms, Adobe prioritizes securing user data with robust encryption and authentication methods. The company also ensures compliance with global privacy regulations, giving users confidence in the security of their work.

Lastly, Adobe is committed to **diversity and inclusion** within the creative industry. The company fosters an inclusive culture both internally and in the design of its products. Adobe’s tools are designed to support a wide range of creative workflows, enabling users from diverse backgrounds to express themselves and succeed.

In conclusion, Adobe’s practices of seamless collaboration, continuous updates, customer-centric design, data security, and diversity ensure the company remains a leader in the creative software industry. These practices empower creatives globally, helping them bring their digital experiences to life.

Report and Learnings

WEEK1	
Day and Date	Report
27/05/2024 Monday	I attended the orientation session, which introduced me to the project's scope, the team I'd be working with, and the workflows involved. This session was crucial for understanding how my role fits into the larger objectives and aligning with the tools and expectations.
28/05/2024 Tuesday	I understood the problem and focused on gaining clarity about the project requirements. The core issue was optimizing queries to enhance performance and accuracy in data retrieval. I broke down the problem into smaller components to identify potential bottlenecks and areas for improvement.
29/05/2024 Wednesday	I explored speech-to-text technologies to understand how they could contribute to the project's needs, particularly for converting user queries into actionable data. Additionally, I delved into AWS tools like **Amazon AWS transcribe**, **Lambda**, focusing on their relevance to improving the retrieval and processing of data in the query optimization pipeline.
30/05/2024 Thursday	I researched RAG (Retrieval-Augmented Generation) systems in detail. This included learning about how RAG combines retrieval mechanisms with generative models to produce accurate, context-aware outputs. I studied its architecture, implementation strategies, and how it could be applied to query optimization.
31/05/2024 Friday	I set up the development environment, ensuring all necessary tools, libraries, and configurations were installed. This included integrating APIs, setting up local and cloud-based environments, and running initial tests to validate the setup. This step laid the groundwork for the implementation phase.

Learnings

During the first week of the internship, the primary objective was to understand the scope of the project and familiarize myself with the team and the workflows involved. The orientation session was particularly crucial as it gave me a broader perspective on the overall project and how I could contribute effectively. One of the key learnings was the importance of aligning with the project's objectives early on and understanding how each part of the system fits into the larger picture. I gained clarity about the project's goals and began breaking down the problem into smaller, manageable components, which helped me understand where bottlenecks might occur and areas where improvements could be made.

The process of analyzing the problem and understanding the requirements helped me recognize how important it is to have a clear problem definition. Additionally, I explored various technologies and tools like AWS Lambda and Amazon Transcribe, which I would later use to optimize the query processing pipeline. This week's focus on the fundamentals of the project laid a strong foundation for the tasks ahead, allowing me to align my efforts with the expectations of the team.

Understanding the project in its entirety also made me realize how data retrieval and query optimization are intertwined with other aspects of the system, including speech-to-text technologies. By the end of the week, I had gained a deeper understanding of the technical stack we would use and had started to prepare myself for the next steps in the project.

WEEK 2	
Day and Date	Report
03/06/2024 Monday	I got familiar with the steps required for the project and the overall workflow. This helped me understand how different components fit together and what I needed to focus on.
04/06/2024 Tuesday	I did deeper research on speech-to-text technologies, specifically comparing **Whisper**, **Azure Speech-to-Text**, and **AWS Transcribe**. I analyzed their accuracy, performance, and integration capabilities to identify the most suitable option.
05/06/2024 Wednesday	I conducted video-related searches to explore potential use cases and requirements for processing video content, ensuring alignment with the project goals.
06/06/2024 Thursday	I compared vector databases, including **Pinecone**, **ChromaDB**, and **OpenSearch**, evaluating their features, performance, and scalability. This helped me shortlist options that fit our project needs.
07/06/2024 Friday	I compiled my findings into a detailed report and contacted my mentor to discuss the results. I also scheduled a meeting with them to decide which tools and technologies would be most appropriate, considering our company's resources and constraints.

Learnings

In the second week, I deepened my understanding of speech-to-text technologies. I compared different tools like Whisper, Azure Speech-to-Text, and AWS Transcribe. Evaluating their accuracy, performance, and integration capabilities was a critical task, as it directly influenced the project's direction. The ability to convert speech into actionable data was essential for the success of the query optimization pipeline, so I needed to ensure that the tool selected would meet our project's specific needs.

Another significant learning was understanding the intricacies of video data processing. The project required us to work with video files, which added a layer of complexity. I explored how video content could be processed to extract meaningful information, and how this could be integrated into our workflow for querying and processing. Alongside, I compared vector databases like Pinecone, ChromaDB, and OpenSearch to evaluate which would be best suited for our project. I learned how vector databases can help in storing and retrieving high-dimensional data, which is important for handling complex queries.

Towards the end of the week, I compiled my findings and prepared for a discussion with my mentor to determine which tools and technologies would best fit our needs. The ability to compare and contrast different technologies and then make informed decisions based on the project's requirements was a valuable skill developed during this week.

WEEK 3	
Day and Date	Report
10/06/2024 Monday	I chose **Whisper** for speech-to-text and **OpenSearch** for the vector database after analyzing their features and suitability for the project. For testing, I used sample videos from YouTube to create a realistic scenario for the workflow.
11/06/2024 Tuesday	I spent significant time setting up the required tools and dependencies, including installing **Docker** and configuring the environment. This involved troubleshooting installation issues and ensuring everything was running smoothly.
12/06/2024 Wednesday	I focused on processing the data from the sample videos. This included formatting the extracted data, building the schema, and handling errors during the data preparation phase. I iteratively corrected issues to ensure the data was in the right format for queries.
13/06/2024 Thursday	I wrote the code to handle queries and ensured the answers were accurate. This required selecting the correct models, testing with different ones, and refining the query logic to improve performance and relevance.
14/06/2024 Friday	I worked on logically breaking down the data to manage it effectively. This involved experimenting with various approaches to structure and store the data, ensuring it aligned with the project's requirements and could scale as needed.

Learnings

In week three, I selected Whisper for speech-to-text and OpenSearch for the vector database after extensive research. These tools aligned well with the project's needs, and I felt confident that they would support the objectives effectively.
Setting up the required tools and dependencies was time-consuming but crucial. I faced several challenges, especially with Docker installation and environment configuration, which taught me the importance of attention to detail and patience when setting up complex systems.
Processing data from sample videos was the next challenge. I had to extract the data, build a schema, and ensure that the data was formatted correctly for query processing. This stage was particularly educational because it taught me the importance of clean and structured data in ensuring the accuracy and relevance of results. I learned how to handle errors and inconsistencies in the data and how to refine the data pipeline for optimal results.
As I wrote code to handle queries, I realized the importance of continuous testing and optimization. The iterative nature of coding and testing ensured that I could refine the logic and improve the performance of the system. Overall, this week was about combining theoretical knowledge with hands-on practice, and it reinforced the idea that practical experience is key to mastering complex technologies.

WEEK 4	
Day and Date	Report
17/06/2024 Monday	I chose **Whisper** for speech-to-text and **OpenSearch** for the vector database after analyzing their features and suitability for the project. For testing, I used sample videos from YouTube to create a realistic scenario for the workflow.
18/06/2024 Tuesday	I spent significant time setting up the required tools and dependencies, including installing **Docker** and configuring the environment. This involved troubleshooting installation issues and ensuring everything was running smoothly.
19/06/2024 Wednesday	I focused on processing the data from the sample videos. This included formatting the extracted data, building the schema, and handling errors during the data preparation phase. I iteratively corrected issues to ensure the data was in the right format for queries.
20/06/2024 Thursday	I wrote the code to handle queries and ensured the answers were accurate. This required selecting the correct models, testing with different ones, and refining the query logic to improve performance and relevance.
21/06/2024 Friday	I worked on logically breaking down the data to manage it effectively. This involved experimenting with various approaches to structure and store the data, ensuring it aligned with the project's requirements and could scale as needed.

Learnings

In the fourth week, I continued refining the data processing and query optimization pipeline. After choosing the tools and setting up the environment, I focused on improving the system's ability to process data and handle queries efficiently. I spent time experimenting with various methods to ensure that the data was processed correctly and that the results from queries were relevant and accurate.

One of the key challenges was refining the query logic. I worked on selecting the best models for different types of queries and made adjustments to improve their performance. This required me to not only test the models but also explore different techniques to optimize their accuracy. Additionally, I worked on handling large datasets and ensuring that the system could scale efficiently. This experience highlighted the importance of scalability in real-world systems, especially when dealing with large amounts of data.

I also learned how to structure data effectively to improve both performance and usability. By experimenting with different methods, I developed a better understanding of how data should be organized to make retrieval faster and more accurate. This week's work further solidified my understanding of the project's requirements and reinforced the importance of continuous improvement in every step of the process.

WEEK 5	
Day and Date	Report
24/06/2024 Monday	I got the API access to the real data from the corporation and began working with it. Understanding the format of the data was a task since it was complex and lacked proper documentation or a guide.
25/06/2024 Tuesday	I wrote multiple if conditions to extract and process the data correctly. This involved a lot of hit-and-trial efforts to handle the inconsistencies and ensure I was retrieving the necessary metadata.
26/06/2024 Wednesday	I converted the extracted data into a CSV file to analyze and understand it better. This step was manual-heavy and required careful checking to ensure the data was structured properly.
27/06/2024 Thursday	Using the processed data, I implemented the rough model I had worked on last year. This helped me test its functionality with the real data and validate its effectiveness.
28/06/2024 Friday	On the last day of the week, I prepared and presented my progress to the manager. Creating the presentation and presenting it took up most of the day. The manager was satisfied with the progress, which was a positive outcome.

Learnings

In week five, I began working with real data from the corporation. This was a turning point in the project, as it allowed me to test the model with actual data, which was more complex and lacked proper documentation. Understanding the format of the data and how to extract meaningful information from it was a challenging task, but it taught me valuable lessons about working with unstructured or poorly documented data. I had to write multiple conditional statements to extract and process the data correctly, and this task required a lot of trial and error.

Once I had the data in a more manageable format, I used it to test the model that I had worked on in previous weeks. This was an important step in validating the model's effectiveness and understanding how it would perform with real-world data. The process of working with real data also highlighted the importance of data cleaning and preprocessing in ensuring the accuracy and relevance of the results.

At the end of the week, I prepared a progress report and presented it to my manager. This exercise in presenting my work was helpful in improving my communication skills and gave me valuable feedback on my progress. It also helped me understand how to structure a presentation effectively and convey technical details to non-technical audiences.

WEEK 6	
Day and Date	Report
01/07/2024 Monday	I focused on incorporating filters into the model and workflow we had built. I brainstormed different ideas and explored various ways to implement them effectively within the system.
02/07/2024 Tuesday	I researched and tested different codes and methods, including those available on official websites, to find solutions that fit our requirements. This involved iterating on the workflow and making incremental improvements.
03/07/2024 Wednesday	Despite the efforts, the results were still average, achieving only about 30% of our desired outcomes. This prompted me to dig deeper into understanding the limitations of our current approach and identify areas for improvement.
04/07/2024 Thursday	I shifted focus from performing vector searches solely on documents to exploring different approaches that could yield better results. This required extensive research and experimentation with new ideas.
05/07/2024 Friday	Throughout the week, I collaborated with colleagues who had experience using similar tools for other tasks within the corporation. Their guidance helped me refine the approach and consider alternative solutions tailored to our needs.

Learnings

During week six, I focused on improving the model by incorporating filters and experimenting with different techniques to optimize the results. I researched various methods and tried implementing them to see how they would affect the performance of the system. This week was challenging because the results were still not as good as expected, with only about 30% of the desired outcomes achieved. This prompted me to dive deeper into the limitations of the current approach and search for better solutions. I also shifted my focus from performing vector searches solely on documents to exploring new approaches that could yield better results. This involved extensive research and experimentation with different strategies, which was a crucial learning experience. Collaborating with colleagues who had more experience with similar tools was immensely helpful. Their guidance allowed me to refine my approach and consider alternative solutions tailored to our needs.

This week emphasized the importance of collaboration and continuous learning. The process of trial and error and learning from others helped me overcome some of the obstacles I faced. It also taught me the value of perseverance in problem-solving, especially when results are not as expected.

WEEK 7	
Day and Date	Report
08/07/2024 Monday	Up until now, I had been using **OpenSearch local**, but this week I worked on integrating **AWS OpenSearch Cloud services** by using its API calls. This involved setting up the cloud environment and configuring it to work seamlessly with the existing setup.
09/07/2024 Tuesday	I decided to implement a new approach by combining **semantic** and **syntactic querying**. To make this work, I researched various tools, and OpenSearch appeared to be a good fit for this combined querying method.
10/07/2024 Wednesday	The process involved a lot of **hit and trial**, but eventually, it worked well for a small set of videos. The experimentation phase was key to understanding how to optimize the queries for the best results.
11/07/2024 Thursday	Since we were now using AWS Cloud, the data upload process took a significant amount of time. This added to the complexity and delays but was necessary for scaling up.
12/07/2024 Friday	During this time, I prepared for and delivered a presentation with the **Product Manager**. She showed interest in the work we had done so far and seemed pleased with the progress. I spent around two days on preparing the presentation and presenting it effectively.

Learnings

In week seven, I worked on integrating AWS OpenSearch Cloud services into the project. This was a significant step forward, as it allowed us to scale up the project and handle more data. The process involved configuring the cloud environment and integrating it with the existing setup, which was a new experience for me. I learned how to make API calls to the cloud service and manage data in a cloud environment, which is a valuable skill for any data-related project.

I also implemented a new approach by combining semantic and syntactic querying. This method allowed us to improve the accuracy and relevance of the results, and it was an important breakthrough in the project. The process of experimenting with different techniques and refining the querying approach taught me the importance of innovation and flexibility in data-driven projects.

The transition to using the cloud also introduced new challenges, such as data upload delays, which impacted the project's timeline. However, these challenges were necessary for scaling the project and ensured that we could handle larger datasets. Overall, this week was about integrating new technologies and refining our approach to improve the system's performance.

WEEK 8	
Day and Date	Report
15/07/2024 Monday	This week, I was able to achieve the appropriate results by implementing **hybrid techniques**, which involved combining both **semantic** and **syntactic** rankings. By ranking the results in both domains, I was able to improve the accuracy and relevance of the search outcomes.
16/07/2024 Tuesday	After ranking the results, I **normalized** them to ensure that the right weight was given to each type of result. This step helped fine-tune the output, ensuring that the most relevant data was prioritized and presented effectively.
17/07/2024 Wednesday	The next task was **designing the frontend** for displaying the results. I had to carefully plan how the search results would appear, especially what metadata to show. This was crucial, particularly for videos, where selecting the right text to display was important for user understanding.
18/07/2024 Thursday	I worked on **formatting the backend** to ensure the right text was pulled and displayed alongside the video metadata. This required making sure the system was retrieving the appropriate data and formatting it correctly for the frontend display.
19/07/2024 Friday	I used **Streamlit** to build the frontend interface, which allowed us to quickly deploy and visualize the results while also optimizing the search outputs. Up until this point, we had been focusing on a subsection of products within the corporation, so this was a step toward refining the solution for a broader application.

Learnings

In week eight, I achieved significant progress by implementing hybrid techniques that combined semantic and syntactic rankings. By ranking the results in both domains, I was able to improve the search outcomes' accuracy and relevance. This was a crucial improvement in the project, as it ensured that the most relevant data was prioritized.

I also worked on normalizing the ranked results to ensure that each type of result received the appropriate weight. This step was critical in fine-tuning the output and ensuring that the data displayed to the user was relevant and useful. Additionally, I focused on designing the frontend for displaying the search results. This task required me to think carefully about how to present the data in a way that was easy for users to understand. Using Streamlit to build the frontend interface was a great learning experience. Streamlit allowed me to quickly deploy and visualize the results, which was essential for testing and refining the system. This week also marked a transition from focusing on a narrow set of products to refining the solution for broader use within the corporation. It was a rewarding experience to see how far the project had come and how the changes I had implemented contributed to its success.

WEEK 9	
Day and Date	Report
22/07/2024 Monday	This week, everything had to be finalized in preparation for the final presentations in the **10th week**. I worked on finalizing the model, ensuring all the components were integrated and functioning as expected.
23/07/2024 Tuesday	I focused on **scaling the workflow** to handle thousands of videos. This involved uploading the data to the cloud and making sure it was processed correctly through the entire pipeline, from backend to frontend.
24/07/2024 Wednesday	I transitioned the **frontend** to **React** and updated the **backend** to **Flask** to ensure better performance and scalability. This shift was crucial to handle the increased load and improve user experience.
25/07/2024 Thursday	After integrating everything, I processed the data for all the videos, ran the queries, and ensured the results were consistent across the board. This step was vital to ensure that the system was working correctly at scale.
26/07/2024 Friday	At the end of the week, I gave a presentation to the **manager**, who was impressed with the work and progress made. This was a precursor to the final presentation with the **director**.

Learnings

In week nine, the primary focus was on finalizing the project and preparing for the final presentations. I worked on scaling the system to handle thousands of videos, which required me to ensure that all components were properly integrated and functioning at scale. This process involved uploading large amounts of data to the cloud and ensuring that it was processed efficiently through the entire pipeline.

I also transitioned the frontend to React and updated the backend to Flask, which helped improve performance and scalability. The shift to these technologies was crucial for handling the increased load and providing a better user experience. Once the system was scaled up, I tested it with a large dataset to ensure that the results were consistent and accurate.

At the end of the week, I gave a presentation to my manager, who was impressed with the work done so far. This presentation helped me refine my communication skills and provided valuable feedback that I could use to make the final presentation even better.

WEEK 10	
Day and Date	Report
29/07/2024 Monday	This week, I gave the **presentation to the entire team**, showcasing the project's outcomes. Afterward, I made some adjustments to the presentation for the **director** to ensure it was aligned with their expectations and addressed all necessary points.
30/07/2024 Tuesday	Once the presentations were finalized, I focused on **uploading all the project code to the company's GitHub repository**. This ensured the entire team had access to the work done throughout the project.
31/07/2024 Wednesday	I also uploaded the **PowerPoint presentations** and a **video demo** of the project to the corporate folder. This was essential for archiving and sharing the results with stakeholders.
01/08/2024 Thursday	The last task was to **return the laptops** and gather any required documents. This marked the final administrative step to officially close the project.
02/08/2024 Friday	The final days were **calm**, as I took time to reflect on the journey. I cherished the experience and said **goodbye to colleagues and mentors**, expressing my gratitude for their support and collaboration throughout the project.

Learnings

The final week of the internship was focused on wrapping up the project and delivering the final presentation. I made sure that the presentation addressed all key points and was aligned with the director's expectations. Once the presentation was complete, I uploaded the project code to the company's GitHub repository, ensuring that all team members had access to the work.

I also uploaded the PowerPoint presentation and a video demo of the project to the corporate folder, which served as an archive for future reference. The final days of the internship were calm, allowing me time to reflect on the entire journey. It was a fulfilling experience to see how much progress I had made and to appreciate the collaboration and support I received from my colleagues and mentors.

The internship not only enhanced my technical skills but also improved my ability to communicate complex ideas effectively. It was a rewarding experience that has prepared me for future projects in the field of data science and machine learning.