

Frontend Development

Summer Training Report submitted in partial fulfillment of the requirement
for the degree of

BACHELOR IN TECHNOLOGY

in

ELECTRICAL AND ELECTRONICS ENGINEERING

By

Ashish Kumar Tiwari (04415004923)

To

ELECTRICAL AND ELECTRONICS ENGINEERING DEPARTMENT



MAHARAJA SURAJMAL INSTITUTE OF TECHNOLOGY
AFFILIATED TO GURU GOBIND SINGH INDRAPRASTHA
UNIVERSITY
JANAKPURI, NEW DELHI -58

2023-2027

Certificate No: **LMTI20D**Date: **27/08/2025****INTERNSHIP COMPLETION CERTIFICATE**

This is to certify that **Mr. Ashish Kumar Tiwari**, from **Maharaja Surajmal Institute of Technology, Janakpuri, New Delhi**, has successfully completed his internship with **LM Innovation Private Limited** from **June 16, 2025 – July 16, 2025** as a Frontend Developer.

During his internship, **Ashish** played a pivotal role as a frontend developer of the tech team in the development of VidyaHome, an initiative by **LM Innovation Private Limited**, along with contributing to other technology-driven solutions of the company. He demonstrated excellent technical acumen, problem-solving skills, and leadership qualities in guiding the team and ensuring timely execution of project milestones.

Ashish extensively **Improved the responsiveness and performance of the company's tutoring website by refining frontend logic, implementing reusable UI elements, and optimizing React component rendering.** through seamless functionality. His ability to align technical workflows with business objectives ensured that **VidyaHome** project reached a higher level of innovation and usability.

We highly appreciate his **dedication, leadership, and sense of responsibility**, which left a significant impact on our product development journey.

We wish Ashish continued success in all his future professional endeavors.

Best regards,



Harsh Singh

Director

LM INNOVATION PRIVATE LIMITED



ACKNOWLEDGEMENT

I am deeply grateful to LM Innovation Pvt. Ltd. for providing me with the opportunity to undertake my Summer Training Internship from 16th June 2025 to 16th July 2025. The experience has been extremely valuable in enhancing my technical and professional skills, particularly in the field of Frontend Web Development using React.js.

I would like to express my sincere gratitude to Mr. Rahul Verma, my mentor at LM Innovation Pvt. Ltd., for his continuous guidance, encouragement, and support throughout the internship. His insights and feedback helped me gain practical knowledge and confidence in real-world software development.

I extend my heartfelt thanks to the Department of Electrical Engineering, Maharaja Surajmal Institute of Technology, New Delhi, for providing me with this wonderful opportunity to bridge the gap between theoretical learning and industrial practice.

Finally, I would also like to thank all my colleagues, friends, and family for their motivation and assistance during this internship journey.

Ashish Kumar Tiwari
Roll No: 04415004923

ABSTRACT

This report presents the details of the Summer Training Internship undertaken by Ashish Kumar Tiwari, a student of B.Tech in Electrical Engineering at Maharaja Surajmal Institute of Technology, New Delhi, from 16th June 2025 to 16th July 2025 at LM Innovation Pvt. Ltd.

The objective of this internship was to gain practical exposure to the software development process, with a focus on Frontend Web Development using React.js. During the training period, I worked on designing and developing responsive user interfaces and interactive components for a real-world web application. The work involved implementing React components, state management, routing, and API integration, along with applying modern UI/UX design principles to ensure an intuitive and user-friendly experience.

This internship provided a valuable opportunity to bridge the gap between theoretical knowledge and industrial practice. It enhanced my understanding of web technologies, improved my problem-solving skills, and strengthened my ability to work collaboratively in a professional environment.

Overall, the experience at LM Innovation Pvt. Ltd. has been instrumental in shaping my technical foundation and has motivated me to pursue further learning and innovation in the field of frontend development

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Introduction of the Company

LM Innovation Pvt. Ltd. is a Delhi-based startup company focused on developing innovative digital products that solve real-world problems and add value to people's lives. Established four years ago, the company has steadily grown to a team of around 30 talented professionals who are passionate about building impactful technology-driven solutions.

The primary product developed by LM Innovation is VidyaHome (www.vidyahome.com), an advanced tutoring platform that connects students with qualified and verified home tutors. The platform simplifies the process of finding the right tutor by offering features such as subject-based search, scheduling flexibility, and a smooth, interactive interface. It aims to make quality education accessible, personalized, and convenient for learners of all levels.

In addition to VidyaHome, LM Innovation also manages a School Vehicle Tracking System, designed to ensure the safety and real-time monitoring of school vans and buses. This system enables parents and schools to track the live location of vehicles, enhancing student security and operational efficiency.

The company's goal is to create products that combine innovation, simplicity, and social impact — delivering solutions that improve daily life for individuals and communities.

LM Innovation Pvt. Ltd. operates from D-156, Dwarka, Bharat Vihar, New Delhi – 110078, and follows a collaborative work culture where technology, creativity, and problem-solving intersect to bring ideas to life.

During my internship, I was part of the Frontend Development Team, where I contributed to the design and development of the user interface for the VidyaHome web application. My responsibilities included creating responsive layouts, implementing React.js components, and collaborating closely with the tech team to ensure smooth functionality and user experience.

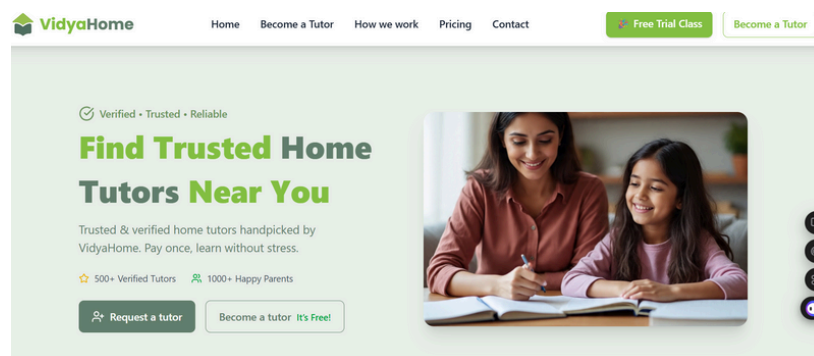


Fig 1-Home Page of VidyaHome

Objectives of the Internship

The primary objective of my Summer Internship at LM Innovation Pvt. Ltd. was to bridge the gap between theoretical learning and real-world application through hands-on experience in Frontend Web Development using React.js.

The internship was designed to help me gain practical exposure to modern web technologies, professional teamwork, and project development practices in an industry setting.

Specific Objectives:

1. To understand the workflow of a software development company and learn how different teams collaborate to build a complete product.
2. To gain hands-on experience in React.js, including component creation, state management, routing, and API integration.
3. To design responsive and user-friendly interfaces using modern web technologies like HTML5, CSS3, JavaScript, and React libraries.
4. To learn version control systems (Git & GitHub) and follow collaborative coding practices.
5. To improve debugging and problem-solving skills through real-world challenges in frontend development.
6. To understand UI/UX design principles and apply them to enhance the overall look and feel of the product.
7. To develop communication and teamwork abilities by working alongside experienced professionals in the tech team.
8. To contribute to the actual development of a live project — the VidyaHome tutoring platform — and understand its deployment and testing process.

TOOLS AND TECHNOLOGIES USED



React.js

- A JavaScript library used for building dynamic user interfaces and single-page applications.
- I used React.js to create reusable components, manage application state, and handle page routing efficiently.



HTML5 (HyperText Markup Language)

- Used to structure the web pages and define the layout of various sections.
- Helped in creating a semantic and accessible structure for the website.



CSS3 (Cascading Style Sheets)

- Utilized for designing responsive and visually appealing web layouts.
- Implemented flexbox, grid system, and media queries for adaptability across devices.



JavaScript (ES6+)

- The core scripting language for adding interactivity and logic to web pages.
- Used for event handling, DOM manipulation, and API integrations.



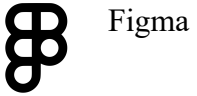
Git & GitHub

- Git was used for version control to track and manage changes in code.
- GitHub provided a platform for team collaboration and code review.



Visual Studio Code

- The main Integrated Development Environment (IDE) used for coding.
- Offers useful extensions and debugging tools that made the development process smooth and efficient.



Figma

- A UI/UX design tool used to visualize layouts before implementation.
- Helped me understand design consistency, spacing, and user flow.

WORK ASSIGNED AND DESCRIPTION

Week 1: Orientation and Environment Setup (16th June – 22nd June 2025)

Objectives:

- To understand the company structure, products, and ongoing projects.
- To set up the development environment and get familiar with the tools used in the organization.

Work Done:

- Attended an introduction session about LM Innovation Pvt. Ltd. and its main product VidyaHome.
- Learned about the tech stack used: React.js, GitHub, Node.js, and VS Code.
- Set up the local development environment — installed Node.js, npm packages, and VS Code extensions.
- Cloned the VidyaHome frontend repository from GitHub and explored the existing codebase.
- Understood project structure, components, and file hierarchy.
- Completed a small task of creating a sample React component to understand JSX, props, and state.

Week 2: Frontend Design and Responsive Layouts (23rd June – 29th June 2025)

Objectives:

- To understand and implement responsive design principles.
- To contribute to basic UI components of the project.

Work Done:

- Designed responsive layouts using HTML5, CSS3 (Flexbox and Grid).
- Implemented reusable React components such as Navbar, Footer, and Buttons.
- Worked on basic routing using React Router DOM.
- Ensured cross-browser compatibility and mobile responsiveness.
- Used Figma designs provided by the design team to implement consistent UI styling.
- Participated in daily stand-up meetings with the tech team to discuss progress.

Week 3: Advanced React Concepts and Dynamic Functionality (30th June – 6th July 2025)

Objectives:

- Deep dive into React concepts such as props drilling, conditional rendering, and event handling.
- Create reusable components for improved UI consistency.
- Implement dynamic data display using JavaScript and component states.
- Enhance website interactivity and responsiveness through advanced frontend logic.

Work Done:

- Developed reusable React components for menus, cards, and forms to maintain consistency across the application.
- Applied conditional rendering to display content based on user interaction and state changes.
- Managed component states using React Hooks (useState, useEffect) for dynamic data rendering.
- Implemented interactive features such as buttons, modals, and form submission with validation.
- Enhanced website responsiveness by applying advanced frontend logic for user interaction.
- Tested and debugged components to ensure smooth functionality and improved user experience.

Week 4: Performance Optimization and Project Finalization (7th July – 16th July 2025)

Objectives:

- Optimize the performance of frontend components.
- Handle errors and implement form validation for better user experience.
- Document all work done during the internship.
- Finalize the project and present it to the supervisor.

Work Done:

- Conducted performance optimization of React components to improve load times and responsiveness.
- Implemented error handling and form validation across multiple forms in the application.
- Documented the developed components, code structure, and workflows for future reference.
- Prepared and submitted the final project, showcasing all developed features and improvements.
- Presented the completed project to the project supervisor and received feedback for further enhancement.

Screenshots and Code Snippets

Homepage – Find Trusted Tutors

The homepage is designed to create the first impression of trust and reliability. It features a clean layout, modern typography, and interactive buttons for user actions like Request a Tutor or Become a Tutor.

```
jsx

<section className="hero">
  <h1>Find Trusted Home Tutors Near You</h1>
  <p>Trusted & verified home tutors handpicked by VidyaHome.</p>
  <div className="buttons">
    <button className="btn-primary">Request a Tutor</button>
    <button className="btn-outline">Become a Tutor</button>
  </div>
</section>
```

Fig 2- Hero Section Implementation

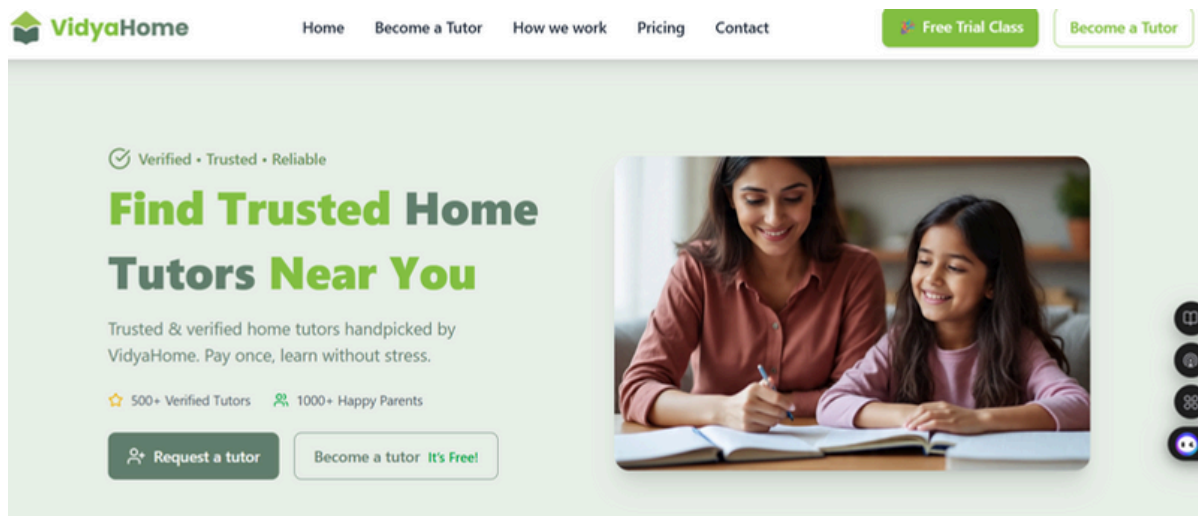


Fig 3- Home Page of VidyaHome

Elite Education Partners Section

This section adds credibility by showcasing logos of top universities whose graduates are VidyaHome tutors.

```
jsk<div className="partners">
  <h2>Learn From Tutors of India's Top Institutions</h2>
  <div className="logos">
    
    
    
    
  </div>
</div>
```

Fig 4 - Institutions Display Component

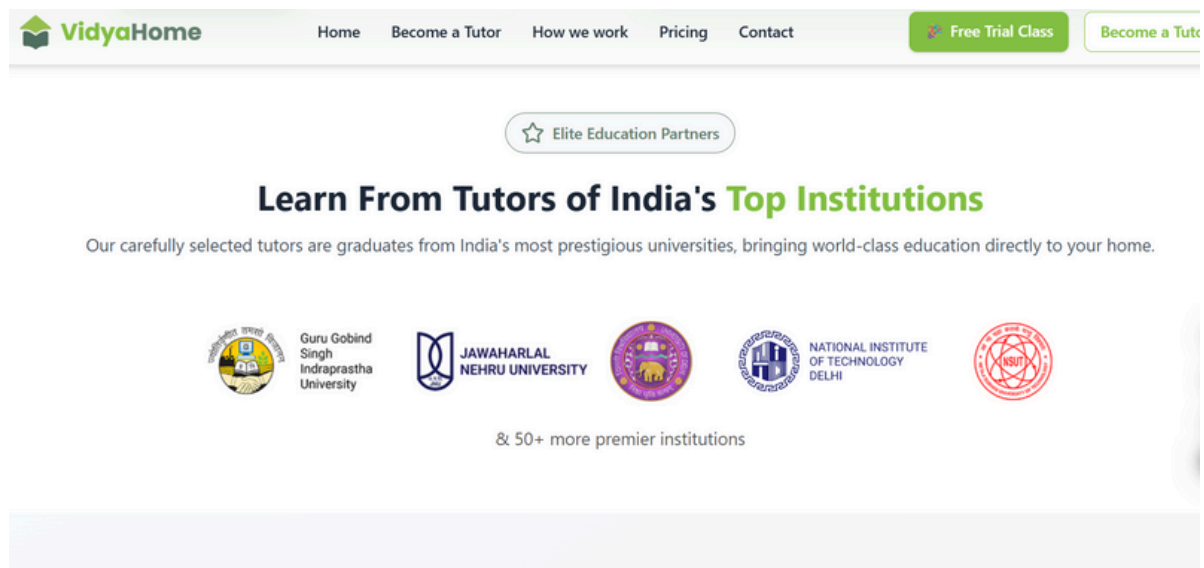


Fig 5 - Institution Display Of Tutors

Start Your Child's Learning Journey Section

This section guides parents toward booking a free trial or choosing a group class. It uses modern React components for tabs, dynamic rendering, and forms.

```
jsx

const [activeTab, setActiveTab] = useState("trial");

return (
  <div className="tab-container">
    <button
      className={activeTab === "trial" ? "active" : ""}
      onClick={() => setActiveTab("trial")}
    >
      Free Trial Class
    </button>
    <button
      className={activeTab === "group" ? "active" : ""}
      onClick={() => setActiveTab("group")}
    >
      Regular Group Class
    </button>
  </div>
);
```

Fig 6 - Tab Component Example

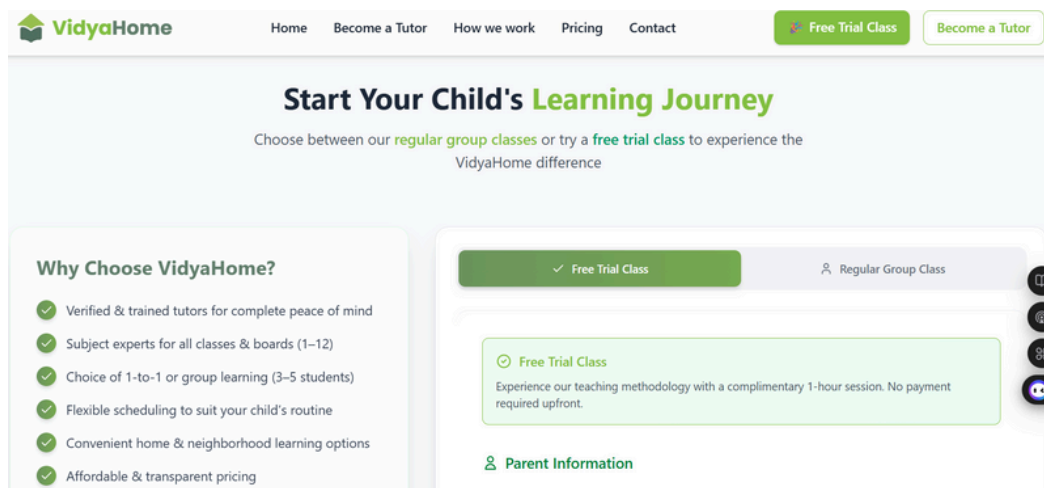


Fig 7 - Tab Component for User To Start Their Journey

More Screenshots

The screenshot shows the VidyaHome registration form. The header includes the VidyaHome logo, navigation links (Home, Become a Tutor, How we work, Pricing, Contact), and buttons for 'Free Trial Class' and 'Become a Tutor'. The form is divided into three main sections: 'Why Choose VidyaHome?' with a list of benefits, 'Parent Information' with fields for Parent Name, Email Address, and Phone Number, and 'Student Information' with fields for Student Name, Age, Class/Grade, and Subjects Needed. A 'Free Trial Class Includes:' section lists three items: 1-hour interactive session, Meet your assigned tutor, and Assessment of your child's learning level. A 'Group & Location Details' section is partially visible at the bottom.

VidyaHome Home Become a Tutor How we work Pricing Contact [Free Trial Class](#) [Become a Tutor](#)

Why Choose VidyaHome?

- ✓ Verified & trained tutors for complete peace of mind
- ✓ Subject experts for all classes & boards (1-12)
- ✓ Choice of 1-to-1 or group learning (3-5 students)
- ✓ Flexible scheduling to suit your child's routine
- ✓ Convenient home & neighborhood learning options
- ✓ Affordable & transparent pricing

Free Trial Class Includes:

- 🕒 1-hour interactive session
- 👤 Meet your assigned tutor
- 📊 Assessment of your child's learning level

Parent Information

Parent Name * Email Address *

Phone Number *

Student Information

Student Name * Age Class/Grade *

Subjects Needed

Group & Location Details

Fig 8 - Form Component For User

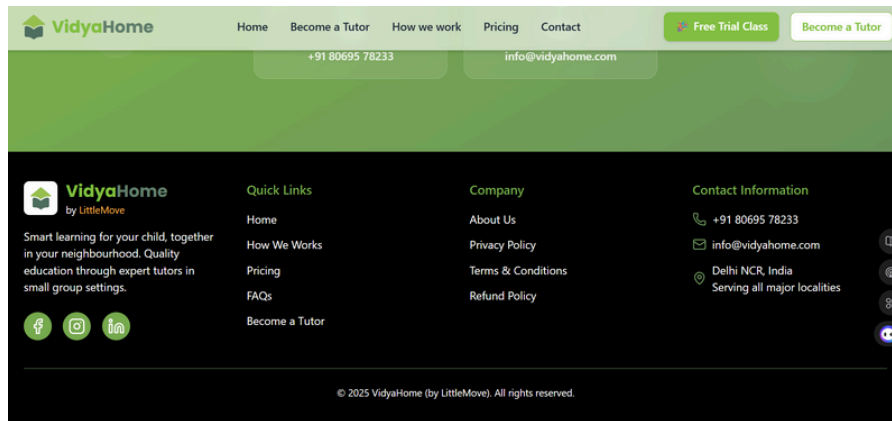


Fig 9 - Footer Section

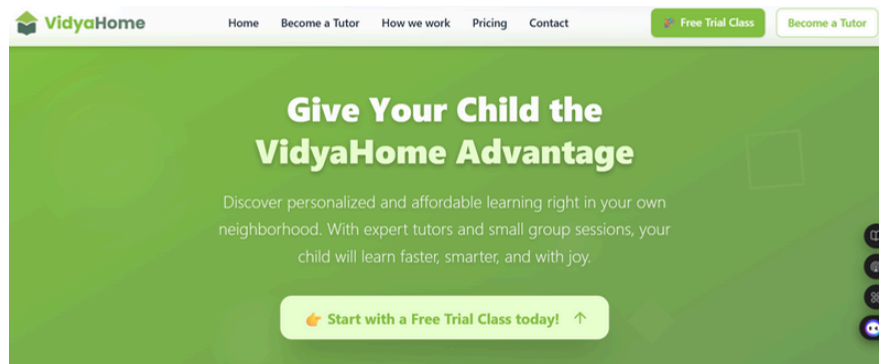


Fig 10 - Start Your Free Trail Section

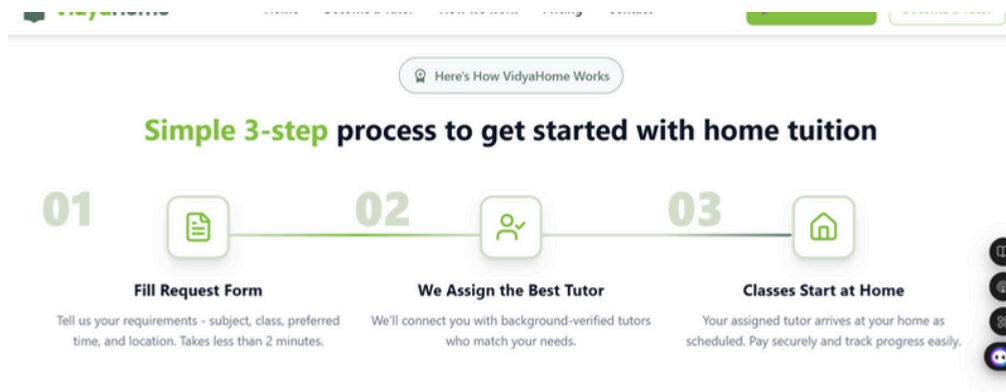


Fig 11 - Step Section

Personal Information

Tell us about yourself

First name *

Last name *

Email Address *

Phone number *

Teaching Experience *

☐ 0-1 Years ☐ 1-3 Years ☐ 3-5 Years ☐ 5+ Years

Highest Qualification *

Estimated Monthly Earnings
₹15,000 - ₹45,000
Based on 10-15 hours/week teaching

Why Tutors Love VidyaHome

- Students assigned directly - no lead chasing
- Weekly guaranteed payouts
- Teach students near your location
- No joining fees or hidden charges
- 24/7 support for any issues

Application Process

1. Submit Application - Complete this form with your details

Fig 12 - Form Section for User

Teaching Preferences

What subjects do you love to teach?

Subjects You Can Teach *

☐ Mathematics ☐ Physics ☐ Chemistry ☐ Biology

☐ English ☐ Hindi ☐ Social Studies

☐ Computer Science ☐ Economics ☐ Accounts

☐ Psychology ☐ Geography ☐ History ☐ Art

☐ Music ☐ Other

Class Levels You Prefer *

Tuition Types *

Availability & Location

When and where can you teach?

Success Story

"I've been earning ₹35,000/month consistently for the past 6 months. The students are genuine and the payment is always on time!"

Priya Sharma
Mathematics Tutor

Fig 13 - Subject Section

RESULT & DISCUSSION

Learning Outcomes

The internship at LM Innovation Pvt. Ltd. provided me with valuable exposure to real-world software development practices, particularly in frontend development using React.js. During the four-week training period, I gained both technical and professional skills that contributed significantly to my overall growth as a developer.

React.js Proficiency:

Acquired hands-on experience in developing dynamic web interfaces using React.js, including concepts like props drilling, conditional rendering, event handling, and reusable components.

State and Lifecycle Management:

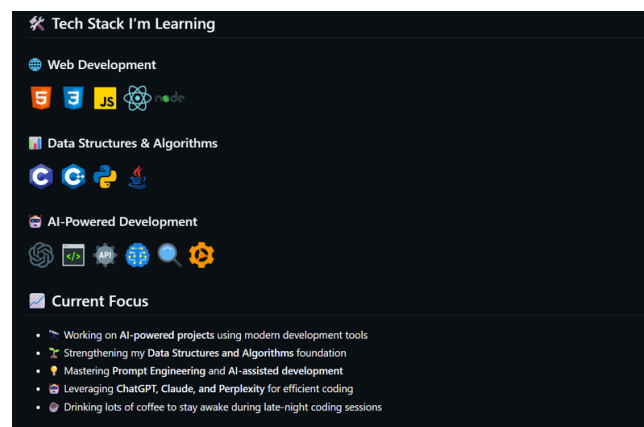
Understood the use of React Hooks such as `useState` and `useEffect` to manage component state and lifecycle methods effectively.

Performance Optimization:

Improved the performance of the website through efficient rendering techniques, form validation, and error handling mechanisms.

Version Control with GitHub:

Collaborated with the technical team using Git and GitHub for code management, version control, and seamless teamwork during the project.



□

Fig 14 - Skill Section /My GitHub

□

Professional Learning Outcomes

Team Collaboration:

Learned to communicate and coordinate effectively with team members in a professional environment, contributing to collective problem-solving and project success.

Project Documentation:

Understood the importance of maintaining proper documentation for each development phase to ensure clarity and continuity in project workflows.

Time Management:

Developed better time management and task prioritization skills by meeting weekly objectives and adhering to project deadlines.

Problem-Solving and Debugging:

Enhanced analytical and debugging skills while resolving real-time issues in the web application.

Industry Exposure:

Gained insights into how startups operate, plan, and execute projects that add value to users' lives through innovation and technology.

CONCLUSION

The four-week internship at LM Innovation Pvt. Ltd. was an enriching and transformative experience that allowed me to apply theoretical knowledge from my academic curriculum to real-world industry projects. Working on the frontend development of the company's tutoring platform provided me with practical exposure to modern web technologies such as React.js, JavaScript, HTML, and CSS, as well as collaborative development tools like Git and GitHub.

Throughout the internship, I gained a deeper understanding of how scalable, user-friendly interfaces are designed, built, and optimized for performance. I also learned the importance of writing clean, maintainable code and creating reusable components for efficient development.

In addition to technical skills, this internship helped me develop vital professional qualities such as teamwork, communication, documentation, and time management. Collaborating with experienced developers and contributing to real project goals gave me valuable insights into the workflow of a tech startup.

Overall, this internship not only strengthened my technical foundation but also enhanced my confidence and problem-solving abilities. The experience has motivated me to continue learning and improving as a frontend developer, and it has provided a solid stepping stone toward my future career in software development.

References

During the internship and the preparation of this report, several online resources, documentation guides, and learning materials were referred to for better understanding and implementation of frontend development concepts. The following references were particularly useful in enhancing my technical knowledge and supporting my work:

React Official Documentation

<https://react.dev/>

Used to understand React fundamentals, hooks, state management, and component architecture.

JavaScript MDN Web Docs

<https://developer.mozilla.org/>

Referred for JavaScript syntax, DOM manipulation, and ES6 concepts.

Axios GitHub Repository

<https://github.com/axios/axios>

Used for API integration and handling HTTP requests within the React project.

W3Schools

<https://www.w3schools.com/>

Consulted for quick syntax checks and practical examples in HTML, CSS, and JavaScript.

YouTube Tutorials

https://www.youtube.com/watch?v=3LRZRSIh_KE

Watched tutorial series on React.js and frontend best practices for hands-on understanding.

LM Innovation Pvt. Ltd. Internal Documentation

Reviewed project-specific resources and team documentation for implementation consistency.