ABSTRACT

This report provides a comprehensive overview of my internship experience at **Cantilever Labs**, where I focused on **MERN Stack web development**—a modern and widely adopted full-stack framework comprising **MongoDB, Express.js, React.js**, and **Node.js**. The primary objective of the internship was to bridge the gap between theoretical knowledge and practical application by gaining hands-on experience in developing real-time, scalable web applications.

Over the course of six weeks, I actively contributed to various stages of the web development lifecycle, including:

- Designing backend APIs using Node.js and Express.js
- Building interactive and responsive front-end interfaces with React.js
- Managing and securely storing data through MongoDB

Alongside technical development, I became proficient with essential industry tools such as **GitHub** for version control, **Postman** for API testing, and **Vercel** for seamless deployment. I also explored best practices in debugging, state management using React Hooks, and collaborative development using agile methodologies.

This internship significantly enhanced my problem-solving abilities, strengthened my collaborative skills in a team-based environment, and deepened my understanding of building and deploying end-to-end full-stack applications suited for real-world use.

Table 1: List of Figures / Diagrams / Graphs

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Fig 2	API Flowchart
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Table 2: List of Tables

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Table 3: List of Screenshots

Screenshot No.	Title
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Screenshot 2	Shopby Home Page
Screenshot 3	Login Page
Screenshot 4	Browse Products Page
Screenshot 5	Cart Page
Screenshot 6	About Page

Table 4: List of Abbreviations

Abbreviation	Full Form
MERN	MongoDB, Express.js, React.js, Node.js
API	Application Programming Interface
UI	User Interface
CRUD	Create, Read, Update, Delete
ODM	Object Data Modeling
VS Code	Visual Studio Code
CI/CD	Continuous Integration / Continuous Deployment
DB	Database
HTML	HyperText Markup Language