

### **Challenges Faced**

- One of the significant challenges I encountered was migrating APIs to Sanity. This required a deep understanding of API structure.
- Understanding how to effectively utilize components in the project was another hurdle their implementation required time and practice.
- Building dynamic pages added another problem and required great attention.
- Managing product data efficiently while ensuring real-time updates across the platform.
- Optimizing server-side rendering (SSR) for enhanced SEO and page load performance.
- Implementing secure user authentication and session management.

### **Learnings**

Learning how to fetch data from Sanity is crucial for building dynamic applications

- Enhancing maintainability by breaking the application into reusable components.
- Utilizing tools like Redux or Sanity API for efficient state management.
- Setting up CI/CD pipelines for smooth and error-free deployments.

### **Suggestions for Improvement**

- More preparation before the hackathon such as workshop on key technologies could help the participants
- Incorporating a structured feedback to the students could provide insights into areas of improvement
- Improving user experience by leveraging AI for personalized product recommendations.

Developing a comprehensive e-commerce platform was an invaluable experience that provided me with hands-on exposure to every stage of the web development process. Working extensively with Next.js, I engineered dynamic routes for product pages and seamlessly integrated a database for efficient inventory management.

To ensure a responsive and mobile-friendly interface, I leveraged Tailwind CSS, while Sanity API streamlined the management of shopping cart data and user information. Though debugging and troubleshooting presented challenges, the successful deployment of the platform on Vercel was a rewarding milestone. This project not only strengthened my technical expertise but also instilled confidence in my ability to take on more advanced development challenges in the future.