

# Ayaan Zeeshan

## Marketplace Builder Hackathon 2025

### Hackathon Day 3: API Integration and Data Migration

## Objective

The goal for Day 3 was to integrate an external API and migrate its data into Sanity CMS to establish a dynamic backend for the marketplace. The tasks included testing endpoints, adapting data to schema requirements, updating Sanity schemas, and ensuring the frontend displayed the data correctly.

## Steps and Process

### API Analysis

API URL: <https://hackathon-apis.vercel.app/api/products>

- The API provided details such as product information, categories, and images.
- Endpoints were validated using Postman to ensure accurate responses.

## Backend Setup

### Tools Utilized

- **axios**: To fetch data from the external API.
- **next-sanity**: For interacting with Sanity CMS.

## Maintaining Data Integrity

- Problem: Ensuring complete and accurate data migration.
- Solution: Added validation steps to identify and fix missing or malformed data before import.

## Performance Optimization

- Batched API requests to manage rate limits and boost performance.
- Cached frequently accessed API responses to minimize repetitive calls.
- Fetched only required fields to reduce data payload size.

## Results

- Successfully migrated products and categories into Sanity CMS.
- Verified data in Sanity Studio for accuracy.
- Displayed the imported data dynamically in the frontend marketplace.

## Future Recommendations

- Automate schema validation to identify mismatches before importing data.
- Improve error tracking by implementing detailed logs.
- Use Sanity webhooks for real-time data synchronization.

## Steps to Execute the Migration Script

### Requirements

- Installed Node.js.
- Configured Sanity project.
- Accessible external API.

# Steps:

## 1. Clone the repository and navigate to the project directory:

- `git clone [repository-url]`
- `cd [project-directory]`

## 2. Install the dependencies:

- `npm install`

## 3. Run the migration script:

- `node scripts/data-migration.mjs`

## 4. Validation:

- Verify the imported data in Sanity Studio.

Check the frontend to ensure product listings and categories are displayed correctly.