CraftHub : A Local Artisan Support Platform

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Abstract— **The "Local Artisan Support Platform" is a digital initiative aimed at bridging the gap between traditional artisans and modern consumers by providing a dedicated online space to showcase, promote, and sell handmade and culturally significant products. With the rise of e-commerce and the threat of industrial mass production, many local**

artisans struggle to sustain their crafts due to limited market access, lack of digital literacy, and minimal visibility. This platform empowers artisans by allowing them to create personalized profiles, narrate their stories, and directly engage with a larger audience, thereby fostering cultural preservation and economic sustainability.

The platform distinguishes itself from existing alternatives by offering unique features such as storytelling elements, skill development resources, and a community forum for artisans and consumers alike. It also focuses on rural development and promotes inclusive growth by encouraging fair trade and supporting regional craftsmanship. By integrating user-friendly technology, the project aims to revitalize fading art forms, ensure artisans' livelihoods, and promote conscious consumerism.

This report explores the conceptual framework, technical architecture, feasibility study, and implementation plan for the proposed platform, demonstrating how technology can be harnessed to bring meaningful change to grassroots artisanship.

Keywords- **Local artisans, traditional crafts, digital empowerment, artisan marketplace, cultural heritage, rural economy, e-commerce, community platform, skill development, craft promotion**.

I. INTRODUCTION

India's rich heritage of traditional craftsmanship is facing an existential crisis in the modern digital era. Local artisans, despite their unique skills and cultural value, often struggle to access broader markets and earn sustainable livelihoods. Factors such as limited digital literacy, lack of visibility, and the dominance of mass-produced alternatives contribute to this challenge. As a result, many artisans are either forced to abandon their craft or continue in economic obscurity.

Figure 1:Introduction

To bridge this gap, the project "CraftHub" has been conceptualized as a digital platform dedicated to empowering local artisans. It aims to connect them directly with customers, thereby bypassing intermediaries and ensuring fair compensation for their work. Beyond a mere marketplace, CraftHub also serves as a storytelling and community-building platform where artisans can share their journeys, techniques, and cultural insights.

This research paper outlines the motivation, methodology, design architecture, and technology used in developing CraftHub. The platform is developed with a focus on accessibility, scalability, and user engagement. Through CraftHub, the study seeks to demonstrate how digital innovation can promote inclusivity, preserve cultural heritage, and support rural livelihoods in a sustainable manner.

This paper presents the conceptualization, design, development, and analysis of the CraftHub platform. It

explores how the integration of modern technologies such as the MERN stack (MongoDB, Express.js, React.js, Node.js), cloud deployment services like Vercel, and responsive web design can create a scalable and impactful solution. Moreover, the platform includes support features such as artisan profiles, community forums, and educational resources aimed at promoting skill enhancement and engagement.

II. LITERATURE REVIEW

The intersection of technology and traditional artisan support has been a growing subject of academic and social interest. Various studies have highlighted the need for inclusive digital platforms to promote indigenous craftsmanship while empowering artisans economically.

1) Traditional Craft Sector and Challenges Previous research shows that local artisans in India often rely on middlemen for product distribution, which significantly reduces their profit margins (Rao & Joshi, 2019). Additionally, lack of awareness about digital tools, limited access to e-commerce platforms, and poor internet infrastructure in rural areas have contributed to the declining sustainability of this sector (Singh et al., 2020).

2) Existing Platforms and Gaps

While platforms like *Amazon Karigar*, *iTokri*, and *Thathera* cater to handcrafted products, they primarily focus on product listing and sales. These platforms often do not offer holistic support systems such as storytelling, community forums, or skill-building resources for artisans. Moreover, user experience, transparency in artisan earnings, and the emphasis on cultural heritage remain underexplored in many of these solutions.

Existing Platform	What it does	Scope for CraftHub
1. iTokri	Rich product variety and storytelling	Broader artisan inclusion and skill development resources
2. Gaatha	Heritage-focused curation	Integration of digital tools for artisan growth
3.Thathera	Focus on a specific traditional craft	Multicraft platform with storytelling and training
4. Ptal	Promotes sustainable kitchenware	Expanding to lifestyle and utility-based crafts

3) Digital Empowerment and Socioeconomic Impact

Studies such as those by Mehta & Kumar (2021) emphasize the role of technology in bridging the rural- urban divide. When artisans are digitally empowered, it leads to greater financial independence, improved visibility of traditional art forms, and preservation of cultural identity. The use of platforms incorporating community engagement features can result in stronger social support networks and increased learning opportunities.

4) Technology Stack in Artisan-Centric Solutions

There is limited documentation of technology stack choices in existing academic work. However, web development frameworks like MERN (MongoDB, Express, React, Node) have been recognized for building scalable, responsive, and dynamic platforms (Sharma et al., 2021). Additionally, cloud services like Vercel offer real-time deployment capabilities and help improve the speed and availability of platforms that aim to support remote users.

5) Research Gap

Despite the availability of several online platforms and marketplaces, very few are specifically tailored to the unique needs of local artisans. Existing literature lacks discussion around platforms that provide a complete ecosystem—ranging from product display and consumer connection to learning resources and community interaction. This research addresses that gap by proposing CraftHub, a platform that integrates commerce with community-building, storytelling, and skill enhancement.

III. METHODOLGY

The methodology adopted for the development of *CraftHub* follows a structured and user-centric approach to ensure the platform effectively meets the needs of both local artisans and customers. The project is implemented using the Agile development model to allow flexibility and iterative progress.

1) Requirement Gathering

- Primary and secondary research was conducted to understand the pain points of local artisans, such as lack of market access, digital illiteracy, and limited income.

- User personas were created for both artisans and buyers to define key features and expectations.

2) Data Collection

Data was gathered through:

- **Primary Sources**: Interviews with local artisans, online surveys from potential users, and expert opinions from domain professionals.
- **Secondary Sources**: Articles, research papers, government reports, and existing platform studies were reviewed to understand the market and need.

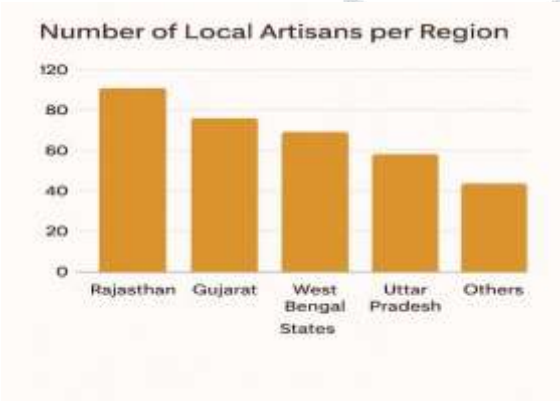

Figure 2: Artisans Graph

3) Qualitative Data

Qualitative data was obtained through:

- Semi-structured interviews with artisans to understand their challenges.
- Feedback from community stakeholders and cultural experts regarding features and usability.

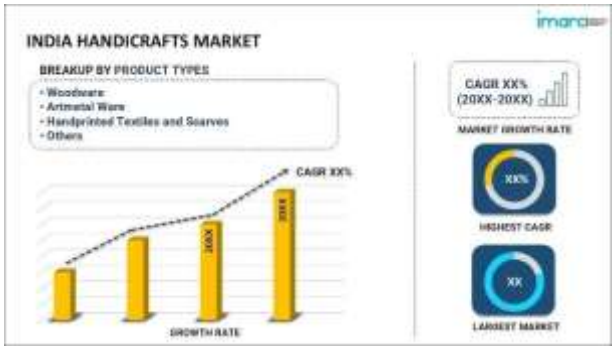

Figure 3:Handicrafts Market Graph

4) Quantitative Data

Quantitative data was collected via:

- Online surveys with over 100 responses analyzing user expectations.
- Feature ranking and ratings to prioritize development efforts.

5) Data Analysis

- **Qualitative Analysis***:* Thematic coding was performed to identify patterns in artisans' needs and preferences.
- **Quantitative Analysis**: Statistical tools were used to analyze survey responses, including frequency distribution and Likert scale interpretation.

6) Ethical Considerations

- Informed consent was taken from all participants.
- No sensitive data was collected or stored.
- Participant identities were anonymized to maintain privacy.

7) System Analysis and Planning

- A feasibility study was carried out covering technical, financial, and operational feasibility.
- Use-case scenarios were documented to map out user interactions and define system functionalities.

8) Design and Architecture

- A responsive front-end interface was designed using ReactJS to ensure ease of use.
- Backend architecture was developed with Node.js and Express, integrated with MongoDB for scalable data storage.
- The system follows a modular architecture to support feature scalability in future updates.

9) Development Process

- The platform was built in sprints using Agile practices:
  - **Sprint 1** focused on artisan registration and profile features.

- **Sprint 2** developed the marketplace module and storytelling section.
- **Sprint 3** included community forums, user reviews, and admin panels.

- Vercel was used for seamless front-end deployment and continuous integration.

10) Testing

- Unit testing and integration testing were carried out for each module using Jest and Postman.
- Manual user acceptance testing (UAT) was performed with selected local artisans and customers to validate usability.

11) Deployment

- The application was deployed using Vercel for frontend and Render for backend API hosting.
- MongoDB Atlas was used to host the database securely in the cloud.

12) Deployment Strategy

After prototype completion, the application will be:

- **Tested** in controlled user environments.
- Feedback-driven iterations will be made before large-scale deployment.
- Plans to collaborate with NGOs and cultural bodies to onboard real artisans during pilot deployment.

13) Feedback and Iteration

- Feedback was collected through surveys and test user engagement.
- Final adjustments were made based on real-time artisan and buyer inputs, improving UI/UX and platform responsiveness.

IV. CONCLUSIONS

The *CraftHub* project emerges as a comprehensive digital initiative aimed at addressing the visibility, accessibility, and empowerment challenges faced by local artisans in the modern marketplace. Through detailed research, analysis of existing platforms, and interaction with real artisans, it became evident that while several platforms support traditional crafts, many fall short in areas like skill development, storytelling, and community engagement.

By offering an integrated platform that showcases artisan profiles, promotes cultural narratives, and supports both learning and selling opportunities, *CraftHub* bridges the gap between artisans and conscious consumers. It not only empowers artisans economically but also preserves traditional craftsmanship in the face of industrialization and digital neglect.

This research contributes to the broader dialogue of digital inclusion, rural empowerment, and sustainable cultural preservation. The project stands as a replicable and scalable solution that can be expanded to regional, national, and even global levels to benefit artisans worldwide.

Future work involves real-time testing, feedback-based improvements, and collaborations with NGOs, government initiatives, and design institutes to further strengthen the platform's impact.

Figure 4:Feature of app

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