SYSTEM STUDY

REQUIREMENT ANALYSIS

This chapter details the process of gathering the system requirements for the **Unified Creator Portfolio Platform**. It includes an analysis of the project's viability through a feasibility study, the methods used for requirement gathering, and a summary of the data collected from target-domain professionals.

3.1 FEASIBILITY STUDY

A Feasibility Study was conducted for the Unified Creator Portfolio Platform project to rigorously assess its viability and practicality before committing significant resources to development. The study focused on three critical areas: Economical, Technical, and Behavioral feasibility, ensuring the proposed system is both justified and achievable in the current market.

3.1.1 ECONOMICAL FEASIBILITY

The Unified Creator Portfolio Platform is economically viable. It is built using cost-effective, open-source technologies, primarily the MERN stack (MongoDB, Express.js, React.js, Node.js), which eliminates all software licensing fees and reduces initial development expenses. Hosting and media storage costs (e.g., Cloudinary, Firebase) are cloud-based and operate on a pay-as-you-go model, allowing costs to scale directly with user adoption and media volume. By addressing a clear and persistent gap in the market for a unified creative portfolio, the platform has a high potential for rapid adoption by its target audience. The high demand for such a specialized tool suggests a favorable cost-benefit ratio.

3.1.2 TECHNICAL FEASIBILITY

The project is technically feasible. The MERN stack is a mature, reliable, and widely supported open-source technology ecosystem. React.js is ideal for building the required responsive, component-driven user interface, especially for the complex domain-specific UI rendering. Node.js and Express.js provide a robust, high-performance backend capable of handling API requests and managing user data. Critically, cloud-based media management services (like Cloudinary or Firebase) are designed specifically for this use case and provide powerful, scalable APIs for video/audio uploading, transcoding, and high-speed delivery via CDN. Skilled MERN stack developers are readily available, and the extensive documentation for these technologies minimizes technical risk.

3.1.3 BEHAVIORAL FEASIBILITY

Behavioral (or Operational) feasibility is exceptionally high, as the system is designed to directly solve the primary frustrations of its target users (creators). High user acceptance is anticipated because the system eliminates the disorganization and fragmented identity creators currently face. By offering a smooth, professional, and unified platform that presents their work in the best possible light (through domain-specific UIs) and protects them from spam (via private feedback), the system is expected to be readily adopted by

cinematographers and musicians. The system's alignment with real-world needs was validated through the requirement-gathering process.

3.2 REQUIREMENT GATHERING

To ensure the platform meets the real-world needs of its target users, a multi-faceted requirement gathering process was employed:

1. **Literature Review (Market Analysis):** As detailed in Chapter 2, existing platforms (Vimeo, SoundCloud, Behance, Instagram) were analyzed to identify feature gaps. This revealed a clear lack of a single platform that elegantly serves both high-quality video and audio content.
2. **Stakeholder Interviews (Questionnaire):** Direct interviews were conducted with professionals in the target fields (cinematography and music) to validate the assumptions from the literature review. The "Feasibility Study Questionnaire" (Section 3.1.4) was used as a basis for these discussions.
3. **Persona Development:** Based on the interview feedback, user personas were created (e.g., "The Aspiring Composer," "The Established Cinematographer," "The Agency Producer") to guide feature prioritization and user-centric design.

3.1.4 FEASIBILITY STUDY QUESTIONNAIRE & FINDINGS

The following questionnaire was used to guide discussions with creative professionals. Below is a summary of the key findings and "answers" gathered.

Questions Asked:

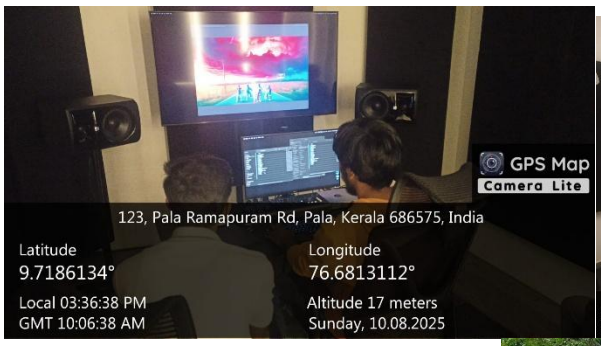
1. What platforms do you currently use to showcase your portfolio?
2. What are the biggest challenges you face with your current solution?
3. If you work in multiple fields (e.g., film and music), how do you manage showcasing both?
4. How important is media quality (e.g., video resolution, audio bitrate) when presented online?
5. How do you currently find collaborators or new clients? How do they find you?
6. What are your concerns about receiving feedback on public platforms?
7. What features are "must-haves" for a platform for your specific field?

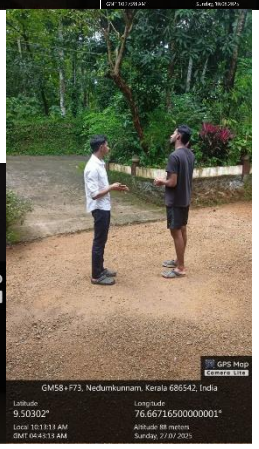
Summary of Professional Feedback:

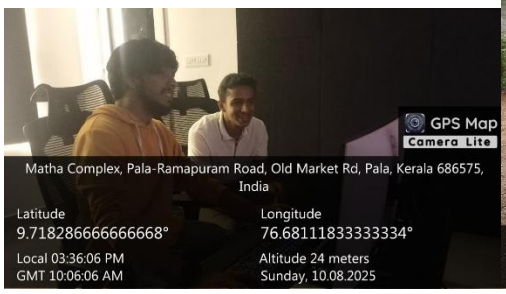
- **Professional 1: Cinematographer, Bangalore**
    - **Findings:** The professional expressed frustration with using Instagram for discovery, as it heavily compresses video and is not seen as "premium." They use Vimeo for high-quality hosting but noted its discovery features are poor. They maintain a separate personal website (Squarespace), which is costly and time-consuming to update.
    - **Key Takeaway:** This validated the need for a **single platform** that combines **high-quality hosting** with **strong discovery features**, justifying the project's core concept.
- **Professional 2: Music Composer, Kochi**

- **Findings:** The composer uses SoundCloud but lamented its lack of support for video (to show their music set to a film clip). They receive a high volume of spam and non-professional comments on their public tracks, which "devalues the work." They found it difficult to connect with filmmakers, as they are on different platforms.
- **Key Takeaway:** This validated the "unified" (Music + Cinema) aspect and was the primary driver for the **private feedback system** requirement, which would filter out "spam" and foster professional connections.

3.1.5 GEOTAGGED PHOTOGRAPH







3.2 SYSTEM SPECIFICATION

3.2.1 HARDWARE SPECIFICATION (CLIENT)

- **Device:** Any modern computer, tablet, or smartphone.
- **Browser:** Google Chrome, Mozilla Firefox, Safari, or Microsoft Edge (latest versions).

3.2.1 HARDWARE SPECIFICATION (SERVER)

- **Platform:** Cloud-based hosting (e.g., Vercel, Heroku, AWS, Azure).
- **Environment:** Node.js runtime environment.
- **Storage:** Cloud-based object storage (e.g., Cloudinary, Firebase Storage, AWS S3).

3.2.2 SOFTWARE SPECIFICATION

- **Frontend:** React.js (JavaScript library for UIs)

- **Backend:** Node.js (Runtime), Express.js (Framework)
- **Database:** MongoDB (NoSQL Database)
- **Client OS:** Windows, macOS, Linux, iOS, Android (via browser)

3.3 SOFTWARE DESCRIPTION

3.3.1 MERN Stack

- **MongoDB (Database):** A NoSQL, document-based database. Its flexible schema is perfect for storing diverse user profiles, which can include varying fields for achievements, social links, and multimedia content.
- **Express.js (Backend Framework):** A minimal and flexible Node.js web application framework used to build the RESTful APIs. It handles all business logic, routing, and communication between the frontend and the database.
- **React.js (Frontend Library):** A JavaScript library for building user interfaces. It is used to create a fast, responsive, and component-driven single-page application (SPA), enabling features like the domain-specific UI rendering.
- **Node.js (Backend Runtime):** A JavaScript runtime built on Chrome's V8 engine. It allows us to run JavaScript on the server, enabling a full-stack JavaScript application that is efficient and scalable.

3.3.2 Cloud Storage (Cloudinary / Firebase)

A dedicated cloud-based media management platform. It is used to handle all media uploads, storage, transformations (e.g., video transcoding, audio optimization), and high-speed content delivery (CDN) for all user-uploaded assets. This separates media from the application logic, improving performance and scalability.