

CollabSphere: A Collaboration Platform for Creators and Brands

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Abstract

The rapid growth of digital marketing has significantly transformed the relationship between brands and content creators. Influencer collaborations have become a core strategy for audience engagement and brand promotion. However, collaboration processes are often informal, unstructured, and managed through scattered communication channels such as social media messaging and email exchanges. This lack of centralized control leads to inefficiencies, miscommunication, and absence of collaboration tracking.

This research presents **CollabSphere**, a software-based collaboration platform designed to streamline and digitally manage interactions between content creators and brands. The system provides structured user authentication, role-based dashboards, profile management, creator search functionality, and collaboration request lifecycle tracking.

CollabSphere improves transparency, enhances workflow management, and provides centralized data storage within a software environment. The proposed system demonstrates how structured software architecture can improve efficiency in digital marketing collaborations while maintaining scalability for future enhancements.

2. Introduction

The evolution of social media platforms has created a new economic model where digital content creators influence consumer behavior. Brands increasingly rely on creators to promote products, launch campaigns, and build brand credibility. Despite this growing demand, collaboration between creators and brands is often handled manually through:

- Social media direct messaging
- Email communication
- Informal agreements
- Third-party influencer agencies

These approaches lack systematic tracking, structured negotiation, and collaboration status monitoring. There is no centralized software system that manages the complete lifecycle of collaboration in an organized manner.

To address these limitations, CollabSphere is introduced as a software-based collaboration management system. The system provides:

- Structured user management
- Role-based access control
- Centralized data storage
- Search and filtering mechanisms

- Digital request lifecycle tracking

The goal of CollabSphere is to create an organized digital ecosystem that connects creators and brands in a secure and efficient manner.

3. Research Background

The development of CollabSphere is grounded in key concepts from software engineering and digital collaboration systems.

3.1 Role-Based Access Control (RBAC)

Role-Based Access Control is a security mechanism that restricts system access based on assigned user roles. In CollabSphere:

- Creators manage personal profiles and respond to requests.
- Brands search creators and initiate campaigns.

RBAC improves security, prevents unauthorized access, and ensures functional separation within the software.

3.2 Software Architecture Principles

CollabSphere follows modular software architecture principles, where the system is divided into:

- User Interface Layer
- Application Logic Layer
- Data Management Layer

This layered structure enhances maintainability, debugging efficiency, and scalability.

3.3 Digital Marketplace Systems

Existing digital marketplaces such as freelancing systems demonstrate the importance of centralized collaboration platforms. However, influencer collaboration tools are often subscription-based and not accessible to small-scale creators. CollabSphere addresses this gap by providing a structured yet simplified prototype software solution.

4. Proposed System: CollabSphere

CollabSphere is a standalone software application that digitally manages collaboration workflows between creators and brands.

4.1 Role-Based Collaboration Framework

The system operates with two primary roles:

Creator Role:

- Create and manage creator profile
- Specify niche and platform
- Add follower count
- View collaboration requests
- Accept or reject requests

Brand Role:

- Create brand profile
- Search creators
- Send collaboration proposals
- Track request status

This structured framework ensures clarity in system operations.

4.2 Creator Search and Filtering Mechanism

The software includes an advanced search module allowing brands to filter creators based on:

- Content niche
- Platform type
- Follower range

This structured search mechanism reduces manual scouting efforts and improves campaign targeting accuracy.

4.3 Collaboration Request Lifecycle Management

CollabSphere introduces a systematic workflow:

1. Brand selects creator
2. Brand submits collaboration proposal
3. System assigns status as “Pending”
4. Creator reviews request
5. Creator accepts or rejects
6. System updates status

This lifecycle tracking ensures transparency and digital documentation of collaboration activities.

4.4 Existing System

Currently, creator–brand collaborations are managed through:

- Direct social media messaging
- Email negotiations
- Influencer marketing agencies
- Informal communication channels

These systems lack structured data storage, centralized dashboards, and digital tracking mechanisms.

4.5 Limitations of Existing System

The current collaboration approach suffers from:

- Absence of centralized software
- Manual negotiation processes
- No status tracking mechanism
- Communication delays
- Data fragmentation
- Security vulnerabilities
- Dependence on third-party intermediaries

These limitations justify the need for a structured software solution like CollabSphere.

5. Methodology

The development of CollabSphere follows the Software Development Life Cycle (SDLC).

Phase 1: Requirement Analysis

- Identify system stakeholders
- Define user roles
- Outline collaboration workflow
- Determine software functional requirements

Phase 2: System Design

- Database schema design
- Role-based permission mapping
- Interface layout planning
- Data flow structuring

Core Data Components:

- User records
- Creator profiles
- Brand profiles
- Collaboration requests

Phase 3: Implementation

The software is implemented using structured programming techniques and modular development principles. The system integrates:

- Authentication module
- Profile management module
- Search module
- Request management module

Phase 4: Testing

Manual testing validates:

- User registration
- Login authentication
- Role-based redirection
- Data storage accuracy
- Request lifecycle management
- System stability

Phase 5: Integration and Evaluation

All modules are integrated and tested collectively to ensure seamless workflow from registration to

collaboration completion.

6. Results and Discussions

The implementation of CollabSphere demonstrates improved efficiency in digital collaboration management.

Observed Improvements:

- Centralized collaboration tracking
- Secure role-based access
- Reduced communication gaps
- Organized data management
- Faster creator discovery

The system ensures that collaboration activities are digitally recorded and traceable, improving accountability.

Discussion

CollabSphere addresses the inefficiencies of informal collaboration systems by introducing structured software management. While the current prototype focuses on core functionality, the modular architecture supports future expansion including:

- Real-time messaging integration
- Payment gateway integration
- AI-based creator recommendation system
- Analytics dashboard
- Mobile version

The software-based model provides better control and offline deployment capability compared to scattered online communication methods.

Conclusion

CollabSphere successfully demonstrates a structured software-based collaboration platform that connects creators and brands in a secure and organized environment. By implementing role-based access control, profile management, search functionality, and digital request lifecycle tracking, the system enhances transparency, efficiency, and collaboration management.

The project highlights the importance of centralized software solutions in modern digital marketing ecosystems and provides a scalable foundation for future intelligent collaboration systems.

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