Enhancing Artistic Exposure through Digital Platforms, A Case Study of 'Art Exhibits'

Ms. Shraddha Gawalkar, Mr. Shivdas S. Jadhav, Mr. Ajay R.N. Murmu, Mr. Kshitij G. Pedpalliwar, Mr. Anup G. Nimgade

Assistant Professor, Department of Computer Engineering, Swaminarayan Siddhanta Institute of Technology, (email: gawalkarshraddha11@gmail.com)

undergraduate student, Department of Computer Engineering, Swaminarayan Siddhanta Institute of Technology, email: jshivdas07@gmail.com)

undergraduate student, Department of Computer Engineering, Swaminarayan Siddhanta Institute of Technology, (email: ajaymurmu9031@gmail.com)

undergraduate student, Department of Computer Engineering, Swaminarayan Siddhanta Institute of Technology, (email: kshitijpedpalliwar@gmail.com)

undergraduate student, Department of Computer Engineering, Swaminarayan Siddhanta Institute of Technology, (email: anupnimgade2@gmail.com)

Corresponding author: Mr. Shivdas S. Jadhav, undergraduate student, Department of Computer Engineering, Swaminarayan Siddhanta Institute of Technology, email: jshivdas07@gmail.com).

ARTICLE INFO

ABSTRACT

In today's digital age, there is a growing market demand for online platforms that can democratize access to art and provide artists with broader exposure. Traditional art galleries often have limited reach and can be inaccessible to many emerging artists. "Art Exhibits" addresses this gap by offering a virtual space where artists can showcase their work to a global audience. This platform not only enhances visibility for artists but also provides art lovers with a diverse range of artworks to explore and appreciate. By providing a space for public interaction and feedback, "Art Exhibits" help artists gain recognition and build their reputation. This research explores the impact of such a platform on the art community, highlighting its role in democratizing art exposure and fostering a collaborative creative environment. The findings suggest that "Art Exhibits" not only meets the market demand for accessible art platforms but also makes a significant contribution to the artistic world by promoting inclusivity, engagement, and innovation.

Keywords: Art Exhibits, Online Galleries, Artist Community, Artistic Exposure, Art Technology, Art Accessibility, Talent Scouting, Community Building.

I. INTRODUCTION

AS a dynamic web application, ART Exhibits is accessible through browsers on various devices. With a responsive design, the platform ensures a seamless experience for users regardless of their screen size or device type. The platform acts as a hub, bringing together artists, collectors, and enthusiasts. Consequently, it fosters connections, collaborations, and mutual appreciation. Artists showcase their portfolios, share their creative journey, and gain exposure.

Collectors and enthusiasts can explore diverse art forms, discover new talents, and engage with the art community. Unlike traditional galleries, Art Exhibits leverage technology. Providing features like commenting, liking, and sharing, the platform enables real-time interactions. Artists can receive constructive feedback, refine their work, and learn from peers. Accordingly, the platform encourages dialogue, sparking creativity and innovation. Consequently, artists register by creating profiles. Uploading high-quality images of their art pieces along with descriptions, they ensure that their work is well-represented and easily accessible to viewers.

The democratization of art allows emerging talents to gain visibility without geographical constraints. Accordingly, art lovers explore published pieces, leaving comments that celebrate creativity or provide thoughtful critiques. Seeking artistic collaboration, organizations can scout for talent; nevertheless, by reviewing artists portfolios, they identify potential collaborators for branding, marketing, or commissioned work. Public responses to art pieces serve as valuable indicators of an artist's skills and appeal.

A key feature of "Art Exhibits" is its user submission capability, allowing artists, collectors, and enthusiasts to showcase their work to a broader audience. Individual users can sign up to access basic features, review showcased items, and submit proposals for new exhibits. Upon approval and verification by the admin, these items are displayed on the platform, ensuring quality and authenticity. This process not only maintains the integrity of the platform but also ensures that the showcased art is of high quality.

Organizations commission artwork for branding campaigns, product designs, or promotional materials, notwithstanding the geographical constraints. Art Exhibits have become a valuable resource for creative professionals, bridging the gap between artists and businesses. Transforming how we perceive and engage with art, Art Exhibits democratizes access, making creativity a global phenomenon. The platform celebrates individual expression while fostering a collective appreciation for diverse artistic forms. Art Exhibits isn't just a gallery; it's a dynamic, interconnected ecosystem that empowers artists, engages enthusiasts, and redefines the art experience for the digital age.

LITERATURE REVIEW

Pixiv [1] began as a little online community based in Japan but has since developed into a community with over 50 million artists from all around the world. It's regularly lauded for having "way better" craftsmanship in general when compared to other art-sharing stages.

ArtStation's [2] rise to noticeable quality comes in idealized timing with the development of the video diversion industry. The location basically adapts to creatives fascinated by video diversions and film activity (in spite of the fact that it invites artists of all sorts). It's not unprecedented for big-name companies in those businesses to explore modern initiatives on ArtStation. ArtStation's focus on niche communities, particularly in the video game and film industries, underscores the value of catering to specific artistic interests.

DeviantArt [3] is exceptionally much a stage you'd call "ancient steadfast". Experienced craftsmen have likely been on DeviantArt, which demonstrates the importance of sustaining an online art community over time.

Artfol [4] formally propelled in April 2021, which makes it the most youthful stage on this list. Having the benefit of client feedback, Artfol identified where previous stages failed and, with the assistance of client criticism, corrected what other 'aspiring-to-be-the-new-standard' stages got wrong.

Behance [5] serves as the LinkedIn of art-sharing websites. It caters to those seeking advanced craftsmanship as a career, offering features like job searching and live streams. Behance's focus on professional networking and career development for digital artists informs 'Art Exhibits' goal of bridging the gap between artists and professional opportunities. By providing tools for portfolio development and showcasing, 'Art Exhibits' helps artists connect with potential employers and clients.

II.   METHODOLOGY

A. *Platform Overview*   "Art Exhibits" is a sophisticated web application built using the MERN stack, ensuring a seamless user experience through its responsive design. The platform serves as a nexus for artists, collectors, and enthusiasts, fostering connections, collaborations, and mutual appreciation. Consequently, artists can showcase their portfolios, share their creative journeys, and gain exposure.

B. Technological Stack & development approach   The application utilizes the MERN stack, comprising MongoDB, Express.js, React.js, and Node.js. The initial stage involves designing the user interface and user experience, focusing on creating an intuitive and visually appealing platform. Utilizing React.js, the front-end development focuses on building the user interface, ensuring responsiveness and interactivity. The back-end development involves setting up the server using Node.js and Express.js, managing HTTPS and REST API services for seamless data transmission & MongoDB for data storage purposes.

C. Formulae for Analysis [9]

To analyze the data collected, we used arithmetic mean and standard deviation to represent the data.

We calculate the arithmetic mean using the formula:

$$\mu = \frac{1}{N} \sum_{i=1}^{N} x_i$$

where N is the sample size and x_i is the observation data.

The standard deviation is calculated using the formula:

$$\sigma = \sqrt{\frac{1}{N} \sum_{i=1}^{N} (x_i - \mu)^2}$$

These formulas help in understanding the central tendency and variability of the data.

To deal with discrepancies in sampled data from different sources, mean normalization was used to scale the range of data around their means. The formula for mean normalization is:

$$x' = \frac{x - average(x)}{\max(x) - \min(x)}$$

where x is the original value and x' is the normalized value.
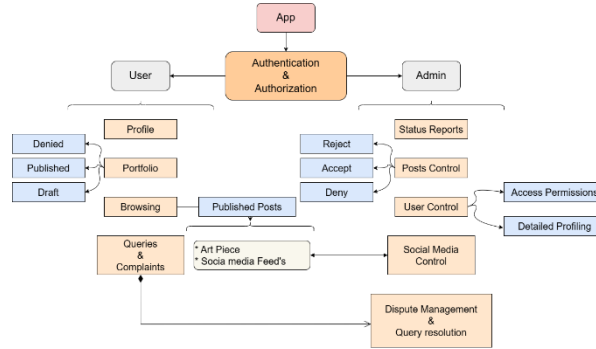
III. PROJECT WORKING

Fig. 1. Application architecture & control flow.
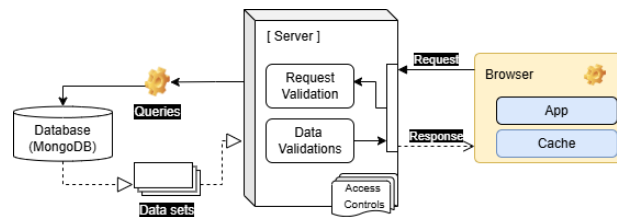
IV.   DATA FLOW

Fig. 2. Information exchange within the service.

V.   APPLICATIONS & SERVICES USED

There are various other tools which are used to develop this application, major of them are explained in detail as follows:

(1) Visual Studio Code, moreover, commonly alluded to as VS Code, a source-code editor made by Microsoft with the Electron System, for Windows, Linux and macOS.

(2) Node.js is an open-source, cross-platform JavaScript runtime environment that executes JavaScript code outside a web browser.

(3) WEB Browser is a software application for accessing information on the World Wide Web. Retrieving content from web servers, the application displays it to users, enabling interaction with web applications.

Utilizing Brevo and Firebase for authentication and notification purposes, the platform ensures secure and efficient user interactions. These services enhance user experience by providing secure and efficient authentication mechanisms.

AIMS & OBJECTIVES

The application majorly resolves the problem of connecting people with ease and publishing their artwork to people interested in their talent on the Internet.

Our major goals via this application are connecting art and artists together, providing a platform to the enthusiasts of art to fill aspects related to art & giving away a platform to showcase talent to public.

The objective for developing this kind of application is to establish a network of art lovers on the internet and community to support the talent of "Sketching and Art Beauty".

RESULTS & IMPACTS

The implementation of the "Art Exhibits" platform has yielded significant results in terms of user engagement, artist visibility, and cross-cultural exchange. The platform will successfully attract a diverse user base comprising artists, organizations, and art lovers, with substantial participation and interaction across these groups.
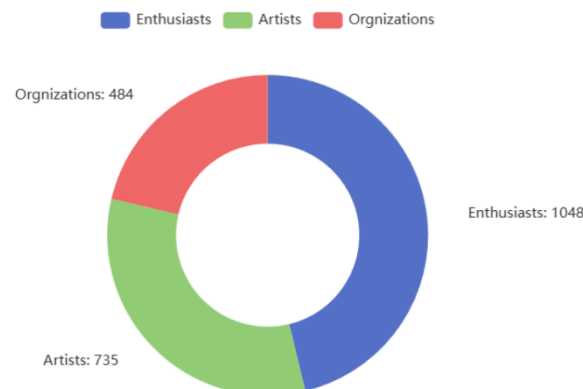

Fig. 3. User engagement statistics on platform.

Artists on the platform have reported a significant increase in the visibility of their work. The ability to showcase art globally has enabled emerging artists to gain recognition and build their portfolios. This aligns with the findings of Samaniego research [8] on the role of interdisciplinary approaches and digital tools in enhancing creative thinking.

The real-time interaction features, such as commenting, liking, and sharing, have fostered a vibrant community of art enthusiasts. Engaging in meaningful dialogues, users offer valuable feedback and support to artists, aligning with the interactive community model seen on ArtStation [2].
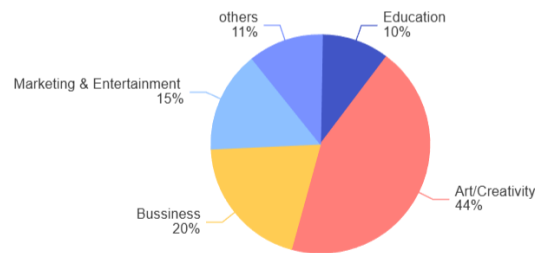
Fig. 4. Distribution of platform influence across various   sectors.

The platform's influence extends to various other sectors, contributing to the overall growth and development of the art community.

The platform has successfully facilitated cross-cultural exchanges and collaborations, effectively breaking down geographical barriers and fostering a global artistic community. Consequently, this aligns with the findings of Samaniego [8], on the role of interdisciplinary approaches and the goals of DeviantArt [3] in promoting artistic collaboration.

"Art Exhibits" has democratized access to art, enabling artists from diverse backgrounds to share their work with a global audience. This aligns with the goals and findings of platforms like Artfol [4] and Pixiv [1], which emphasizes inclusivity and broad artistic exposure.

The platform has become a valuable resource for creative professionals, bridging the gap between artists and businesses and creating new job opportunities. Accordingly, this mirrors the trends observed in the broader job market, as noted in the research of Wang, V., & Wang, D. [9].

Effectively using the platform, organizations scout for artistic talent, leading to various collaboration opportunities; nevertheless, artists successfully connect with potential employers and clients, enhancing their professional prospects, which aligns with the market needs noted by Behance [5].

Analysis of user data provides valuable insights into user behavior and preferences, notwithstanding the challenges. The use of descriptive statistics and trend analysis has helped identify key patterns in user engagement, informing future platform enhancements. This aligns with the research by Lee and Lee [6] on user participation and valuation in digital art platforms, as demonstrated in the case of Saatchi Art.

The "Art Exhibits" platform has had a profound impact on the art community, transforming how people perceive, share, and appreciate art. By providing an accessible platform, it aligns with the research by Zhou and Lee [7].

The increasing popularity of digital art on the platform has mirrored the trends observed in the broader job market. As noted by the research on the impact of digital art on the job market by Wang, V., & Wang, D. [9], the platform has become a valuable resource for creative professionals, bridging the gap between artists and businesses and creating new job opportunities.

VI.   FUTURE SCOPE

We could use the application as a business model in the future. As we know, ART is precious, representing the dedication and competency of one to model their thoughts in real sketch. Consequently, this app will be used to provide services for big organizations/societies to fulfill their enthusiasm for the arts, and we can charge them to use the application.

By interconnecting social media for ART exhibitions in prominent social circles, ART EXHIBITS can become vital, allowing people who are interested in ART to fulfill their expectations. Accordingly, develop the application in a hybrid environment so that the app can be used as a desktop or android application rather than just as a web application.

VII.   CONCLUSION

The 'Art Exhibits' platform has successfully addressed the growing market demand for accessible art platforms, providing artists with broader exposure and fostering a collaborative creative environment; nevertheless, by leveraging advanced technology and a user-centric approach, the platform has redefined the art experience for the digital age, empowering artists, engaging enthusiasts, and fostering a dynamic, interconnected ecosystem.

Democratizing access to art, the platform significantly impacts the art community by facilitating cross-cultural exchanges and creating new job opportunities for creative professionals, notwithstanding the challenges, including technical complexities, data privacy concerns, and market competition.

Overall, "Art Exhibits" has made a substantial contribution to the artistic world by promoting inclusivity, engagement, and innovation. With a strategic focus on future enhancements, the platform can continue to grow and thrive, further solidifying its position as a valuable resource for artists, organizations, and art lovers alike.

REFERENCES

[1] Pixiv. (n.d.). "*Pixiv: A global platform for artistic expression and community building.*" Retrieved from *https://www.pixiv.net/en/*.

[2] ArtStation. (n.d.). "*ArtStation and the evolution of digital art in the video game industry.*" Retrieved from *https://www.artstation.com/*.

[3] DeviantArt. (n.d.). "*DeviantArt: The legacy and impact of an online art community.*" Retrieved from *https://www.deviantart.com/*.

[4] Artfol. (n.d.). "*Artfol: User-centric design in a new era of art sharing platforms.*" Retrieved from *https://www.artfol.co/*.

[5] Behance. (n.d.). "*Behance: Professional networking and portfolio development for digital artists.*" Retrieved from *https://www.behance.net/*.

[6] Lee, J. W., & Lee, S. H. (2019). *"User participation and valuation in digital art platforms: the case of Saatchi Art."* European Journal of Marketing, 53(6), 1 234-12561.

[7] Zhou, Y., & Lee, S. (2024). *"Enhancing artistic productivity with generative AI tools."* Journal of Creative Technologies, 12(3), 45-67.

[8] Samaniego, R., et al. (2024). *"Creative thinking in art education: The role of interdisciplinary approaches and digital tools."* International Journal of Art & Design Education, 33(2), 89-102.

[9] Wang, V., & Wang, D. (2024). "The Impact of the Increasing Popularity of Digital Art on the Current Job Market for Artists." Farragut Club of Digital Arts and Coding, Kingston Pike, Farragut, USA; Department of Electrical Engineering and Computer Science, University of Tennessee, Knoxville, USA.