## **Description and Purpose**

Although some artists post their work on existing social media platforms such as Twitter, Facebook, or Instagram, these platforms are not optimized specifically for artists as users. Furthermore, their algorithms can limit discovery and make it difficult to browse old works. Online gallery websites such as DeviantArt and ArtStation do not make it easy to share art outside of existing communities. The aim of this project is to create a better alternative to these websites as a social media platform to post art.

This project is a social media platform aimed primarily at the art community. It strives to make it easier for artists to share their work online, with a focus on preserving their original pieces as much as possible and making it easy for non-artists to view artwork. It further will create connections between artists and clients to better facilitate collaboration and monetization.

Our website will also incorporate an algorithm to suggest new artists and artwork that appeal to the users’ tastes, suggested likes, followed accounts and even incorporating their own styles. This will assist users to find similar works or artists that appeal to them. As a result, the platform will facilitate the growth of a virtual art community that can be translated into the physical world through suggested in-person collaborations.

**Target Audience**

The website aims to connect artists of varying ages to new users, including other artists, potential clients and viewers. Our platform aims to be inclusive, welcoming all genders, races, users of all languages who are of at least 13 years of age. The platform will allow art to be categorized into explicit and 18+ to be more inclusive of all our users’ preferences and demographic. That being said, the vast majority of our users will likely be tech-savvy young adults who have used or currently use existing forms of social media. We further divide our target audience into artists and clients.

Artists will be the main producers of content for the platform. This site is aimed at both hobbyists and professionals, as our features will appeal to both groups of users. However, the main target audience for artists is aspiring professionals seeking to grow a following and make connections.

Potential clients and viewers will be the main consumers of the content produced on this platform. Due to being an art-sharing site, they will likely be enjoyers of art. By using an algorithm, we should be able to appeal to many types of potential clients and viewers by varying the kind of artwork that is shown to them.

**Proposed Solution and Justification**

For our solution, we would like to create a platform that allows artists to show their work’s potential while allowing others to easily scroll through the website’s utility. Pal-ette allows clients that wish to hire artists to easily discover those in which they are likely to connect with. Our first proposal is to allow artists to create posts and specify custom thumbnails. If the viewers like what they see, then they have the option to download the art to view how the artist intended for it to be viewed. This would solve the issue of artists having to adjust the ratio size of their work to fit into an Instagram post or Facebook post and not be able to show the art as desired.

Preserving art in an online environment can oftentimes be difficult. To address this issue, Pal-ette will include a “Hall of Fame'' style page where older works of art can be appreciated by the community. The chosen artwork will be a result of a community vote that will commence on a monthly basis. Works selected may be recent or from the past. This will preserve artworks that stood out to others and will allow artists to continue receiving credit for their old work.

In order for Pal-ette to be successful, client and artist interaction must be easily accessible. Hence, the main page where artists’ posts are displayed can be viewed by clients and replied to directly. Each client most likely has a specific style of art they are interested in. Thus, in order to facilitate better search times artists are able to add custom tags to their posts. Further categorization can be done automatically using an algorithm. Other job platforms make it hard for artists to find commission work and connect with the right clients. To continue this idea, each account will have the ability to follow other accounts and favorite pages. Once a post is created by a followed account, a notification will be sent to the followers, encouraging community engagement. With more community engagement, the artwork is more likely to be viewed by a wider audience allowing for the creator to receive recognition and a higher likelihood of growing their client base.

Collaborations in the art world are a critical feature. In order to allow for this activity to occur on a wider scale, Pal-ette will help facilitate partnerships by allowing multiple artists to be credited for a single work and providing information for users that wish to collaborate. Since there are multiple steps to creating art, artists can come together to form something they are passionate about. Collaborations allow for more artist exposure since the artists grab attention from both sides’ followers. Our final proposed solution is a gallery creation section for viewers which is somewhat like a virtual art gallery that they can curate. This allows users to specifically select which arts they want to add into the gallery and share the selected pieces.

**Literature Review**

The study Algorithmic and HCI Aspects for Explaining Recommendations of Artistic Images looked into explaining the recommendation of artwork on an online platform and how explaining suggestions is crucial in allowing users to trust the system. Two studies were conducted on Amazon Mechanical Turk utilizing 3 different interfaces: i) no explanation, (ii) explanations based on similar images, and (iii) explanations based on visual features (Dominguez, V., Donoso-Guzmán, I., Messina, P., & Parra, D. (2020)). Different algorithms were used in the study including Attractiveness Visual Features (AVF) and DNN. Moreover, the article researched how different interfaces such as desktop and mobile impact the user’s experience with art recommendations. Overall, it was found that the provided explanations had a positive impact on the user experience and that the more accurate DNN algorithm was found to be favored by users. As a result, Pal-ette will implement a deep neural algorithm that can accurately recommend artwork and collaboration partners while providing explanations to the suggestions.

The study by Xu, Z. and Wang, S looked into the issue of low user satisfaction rates and extensive search times in the traditional interactive model. The study found that the implementation of certain features improved the overall user experience. These features include: using colors to highlight important text rather than underlining, a simple search bar with an input box and button and having a centralized navigation menu. The study concluded that by optimizing the website interface user satisfaction can be drastically improved. It was also seen to improve search times to be as low as 4.9s. When designing the Pal-ette, implementing this form of website design will allow users to easily discover their desired artwork and artists.

Ofer Arazy, Oded Nov, and Nanda Kumar’s study is based on the primary idea of using personalization as a method of accommodating for differences. It was discovered that through the customization of a user’s interface, they are able to have a better experience. Taking this discovery into consideration, we are able to utilize this idea in the form of custom ‘tags’. Artists themselves are constantly aiming to differentiate themselves. Hence, the addition of the customizable feature allows Pal-ette users to have a better interface experience. Moreover, the idea of customization can be further implemented to provide users with several interfaces and allowing users to choose a format that is best for them.

In Dittus’ study (2017), the research team proposes a set of 59 community engagement techniques, or CETs, to consider when designing community-based platforms. These technique prompts were developed after conducting a literature review and consulting a panel of community engagement experts. Two validation studies were then conducted, one where the prompts were tested for practicality by community experts and another where a case study on past Flickr redesign, a photo-sharing platform. The validation studies revealed that redesign elements that aligned with one or more CETs lead to a significant increase in new user engagement. The most notable CETs include everyone contributes, regular updates, varied encounters, foster contact, communication tools, allow browsing, visible record, and show activity. Considering both Flickr and our project Pal-ette are community-based image-sharing platforms, we can assume CETs that were impactful to Flickr’s community engagement would also be impactful for Pal-ette.

The paper “ A pattern language for inclusive design: A set of patterns for designing reusable accessible solutions.” (Valtolina & Sisto, 2022) provides a tree of accessibility factors to consider when designing. The proposed HCI pattern language expands on existing guidelines and other pattern languages in the literature to create an universal pattern language applicable regardless of device. The pattern is divided into three main sections: multi-format presentation, navigation, and interaction. Each then branches into more and more specific considerations in order to ensure a fully accessible application across any device. By referencing this pattern language in the design of Pal-ette, all features available on the application will be fully accessible and maximize the number of potential users on the site.

**Citations**

Dominguez, V., Donoso-Guzmán, I., Messina, P., & Parra, D. (2020). Algorithmic and HCI Aspects for Explaining Recommendations of Artistic Images. ACM Transactions on Interactive Intelligent Systems, 10(4), 1–31. <https://doi.org/10.1145/3369396>

Ofer Arazy, Oded Nov, & Nanda Kumar. (2015). Personalization: UI Personalization, Theoretical Grounding in HCI and Design Research. Association for Information Systems Transactions on Human-Computer Interaction, 7(2), 43–.

Xu, Z., & Wang, S. (2022). Interactive design of personalized website search interface based on visual communication. *Computational Intelligence and Neuroscience, 2022*, 11. Retrieved from <http://myaccess.library.utoronto.ca/login?qurl=https%3A%2F%2Fwww.proquest.com%2Fscholarly-journals%2Finteractive-design-personalized-website-search%2Fdocview%2F2681076392%2Fse-2%3Faccountid%3D14771>

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Dittus, M., Aiello, L. M., & Quercia, D. (2017). Community Engagement Triage: Lightweight Prompts for Systematic Reviews. *Proceedings of the ACM on Human-Computer Interaction*, *1*(CSCW), 1–22. https://doi.org/10.1145/3134674