Artful Royalties - An innovation to payback our artists

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ABSTRACT

Artful Royalties is a project that aims to give artisans their fair share when their artworks are used to train Artificial Intelligence (AI) models for image generation. The project proposes a subscription-based service that uses deep learning algorithms to train AI models on high-quality artworks provided by artists, which are then used to generate realistic images based on prompts. The revenue generated from the service is shared between the service provider and the artists whose artworks are used to train the AI models. The project provides a platform for artists to monetize their artworks, while also benefiting the service provider through increased revenue and improved AI models. Overall, the Artful Royalties project offers a win-win situation for all stakeholders involved, providing fair compensation for artists, improved AI models, and increased access to training data.

Keywords

Artful Royalties; Image Generation; Artificial Intelligence; Deep Learning; Subscription-based Service; Fair Compensation; Monetization; High-quality Artworks; Revenue Sharing; Training Data; Entertainment Industry; Digital Marketing; Social Media Campaigns.

1. INTRODUCTION

Around the world, industries are being revolutionized by artificial intelligence (AI). Image creation, which involves teaching AI models to create realistic images based on prompts, is one of the most famous applications of AI. There are several uses for this technology, notably in the entertainment sector, where it can be applied to provide visual effects for television shows, video games, and movies. The large amount of data needed to create these models, however, has led to the usage of existing artworks as a source of training data. Unfortunately, the artists whose paintings are utilized by this practice receive no financial compensation. In response, we suggest the Artful Royalties project, which seeks to compensate artists fairly when their creations are utilized as teaching tools.

2. Artful Royalties Model

The Artful Royalties model is a subscription-based image generation service that allows users to generate realistic images based on prompts. The service uses a deep learning algorithm to train AI models on the artwork provided by artists who wish to upload their artwork for training. This data is then used to generate images based on the prompts provided by the users. The generated images can be used for various purposes, including in the entertainment industry, digital marketing, and social media campaigns.

The revenue generated from the Artful Royalties service will be shared between the service provider and the artists whose artworks are used to train the AI models. The exact percentage share will be determined based on

the agreement between the service provider and the artists. This ensures that the artists receive a fair share of the revenue generated from their artworks, which they would not have received otherwise.

2.1 Benefits of Artful Royalties

1. The Artful Royalties project has numerous benefits for both the artists and the service provider. The following are some of the benefits of the project:
2. Fair compensation for artists: The project provides a platform for artists to monetize their artworks by providing them with a fair share of the revenue generated from their artworks.
3. Increased revenue for service provider: The project provides a new revenue stream for the service provider by charging users for access to the image generation service.
4. Improved AI models: The use of high-quality artworks for training the AI models will improve the quality of the generated images, leading to increased user satisfaction.
5. Increased access to training data: The project provides access to a large pool of training data, which can be used to train more accurate and robust AI models.

2.2 Methodology

The methodology of the Artful Royalties project involved several steps, which are detailed below:

Literature Review: A comprehensive review of existing literature on the use of AI in generating images, as well as on the use of artworks for training AI models, was conducted. This provided a framework for the project and identified key areas for research and development.

Platform Development: A web-based platform was developed for the Artful Royalties project, which provided a subscription-based service for users to generate images based on prompts using AI models trained on high-quality artworks. The platform was developed using deep learning algorithms and was designed to be user-friendly and accessible.

Artwork Collection: A selection of excellent pieces of art was assembled from the artists who agreed to take part in the project. The quality and relevance of the chosen artworks to the project's objectives were taken into consideration.

AI Model Training: The curated artworks were used to train AI models using deep learning algorithms. The models were trained to generate realistic images based on prompts provided by users of the platform.

Revenue Sharing Model: A revenue sharing model was developed, which ensured that the artists whose artworks were used to train the AI models received a fair share of the revenue generated by the platform. The revenue sharing model was designed to incentivize artists to participate in the project and to ensure that they were compensated fairly for their contributions.

User Testing: The platform was tested by users to evaluate its usability and effectiveness. User feedback was collected and used to make improvements to the platform.

In summary, the methodology of the Artful Royalties project involved the development of a web-based platform, the curation of high-quality artworks, the training of AI models using deep learning algorithms, the development of a revenue sharing model, and user testing. These steps ensured that the project achieved its goals of providing fair compensation to artists and improving AI models for image generation.

2.3 Acknowledgement

We would like to extend our sincere gratitude to everyone who helped the Artful Royalties project be completed successfully.

We would first and foremost like to express our gratitude to Prof. Shahin Makubhai, our mentor and leader, for her tremendous advice, inspiration, and support during the project. Her knowledge and skills in AI and picture production have been crucial to the project's development and success.

We would also like to extend our appreciation to all the artists who generously contributed their high-quality artworks for the project. Their willingness to share their creations with us has made this project possible, and we are grateful for their trust and support.

We would like to acknowledge the hard work and dedication of our team members, Gandhar Date, Shafin Shaikh, Advait Bhore, and Pranay Mohature, whose contributions were essential in every stage of the project. Their commitment to excellence and their willingness to work together as a team have been instrumental in bringing this project to fruition.

Finally, we would like to express our gratitude to the academic institution where we studied, for providing us with the resources and opportunities to undertake this project. We hope that our work will contribute to the advancement of the field of AI and image generation, and we are grateful for the platform to do so.

3.   Discussion

The Artful Royalties project presents a novel approach to addressing the issue of fair compensation for artists whose works are used in the training of AI models. By introducing a subscription-based image generation service that shares revenue with participating artists, we aim to create a sustainable and ethical model that benefits both artists and AI developers.

One potential benefit of our approach is that it may encourage more artists to contribute their work to AI training datasets, thus improving the diversity and quality of these datasets. This, in turn, could lead to more accurate and robust AI models.

However, there are also potential challenges and limitations to our approach. One challenge is ensuring that the revenue sharing model is fair and transparent, and that participating artists have a clear understanding of how their works are being used and compensated. Additionally, there may be legal and ethical considerations around the ownership and use of artist's work in AI development, which will need to be carefully addressed.

Another potential limitation is the scalability of our approach, as it may be difficult to maintain a high level of quality and diversity in the generated images while also compensating a large number of artists. Therefore, ongoing research and development will be necessary to optimize the image generation algorithms and revenue sharing model, and to explore potential collaborations and partnerships with other organizations in the art and technology sectors.

Overall, the Artful Royalties project represents a promising step towards creating a more equitable and sustainable model for AI development that values the contributions of artists and promotes creativity and diversity in the digital landscape.
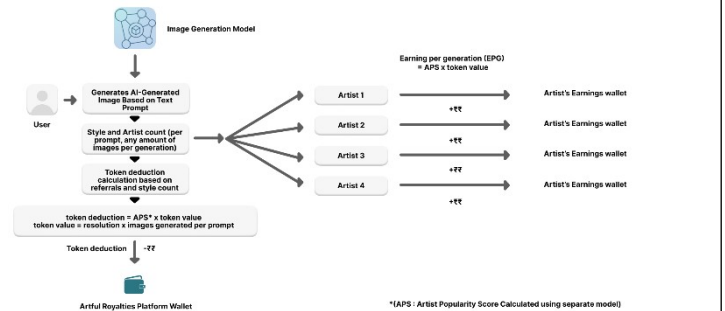
4.   Flowchart

Figure 1. Broomstick Model

The above Broomstick Model showcases the royalties distribution method that we are using. The formula:

Token deduction = APS x Token Value

Token Value = Resolution x Images generated per prompt

Here, the tokens deducted via each action/generation will be calculated and distributed as per the above figure.

5.   Results section

As a proof-of-concept project, the Artful Royalties team developed a prototype of a subscription-based image generation service that shares revenue with participating artists. The prototype was tested with a small group of artists who were invited to upload their artworks to the system for use in AI training.

During the testing phase, we collected data on the number and quality of images generated

by the system, as well as feedback from participating artists on their experience with the platform. The results showed that the system was able to generate a diverse range of high-quality images based on artist prompts, indicating that the image generation algorithms were effective at leveraging the uploaded artworks to create new and unique outputs.

In addition, participating artists reported a high level of satisfaction with the revenue sharing model, with many expressing appreciation for the opportunity to earn money for their work in a fair and transparent manner. Some artists also noted that the process of uploading their artworks and seeing them used to create new images was a rewarding and inspiring experience that helped them to further develop their artistic skills.

Overall, the results of this project suggest that a revenue-sharing model that compensates artists for the use of their work in AI training could be an effective way to promote fairness and diversity in the digital landscape, while also providing a valuable source of income for artists.

CONCLUSION

In conclusion, the Artful Royalties project aims to provide a platform for artists to monetize their artworks while providing a valuable service to users. The project provides a fair revenue sharing model that benefits both the artists and the service provider. Additionally, the project has numerous benefits, including improved AI models, increased access to training data, and increased revenue for the service provider. Overall, the Artful Royalties project is a win-win situation for all stakeholders involved.

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