Signature Work Project Abstract (Draft)

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As the name "化诗入画" suggests, this project aims to build a system that draws images based on poems, specifically ancient Chinese poems. Unlike most drawings done by artists, this system uses Artificial Intelligence (AI) to complete the entire process, from analyzing the poem to producing the final drawing. To achieve this functional goal, the whole process is divided into different stages: 1. Taking the input Chinese poem and using language models to convert it into English prompts that fit the drawing models. 2. Processing the text prompts and sending them to the drawing models along with other necessary settings. 3. Generating the images corresponding to the prompt and displaying the output images. Based on these stages, this project creates a User Interface (UI) that plays a role in user interaction, including taking input poems, printing the output image, allowing people to adjust and download the image, and calling different programs and functions to achieve the design goals.

Moreover, the project has two research goals: 1. Comparisons between the impact of different models on the generated images. 2. Discussions of topics in media theories based on this project's word-to-image system. With this framework, the system allows us to change different AI models to translate poems or draw the images, making it a good test platform for comparing different AI models with the same inputs and settings. Meanwhile, the nature of language, imagery, and cognition in both humans and machines will be compared through these AI-generated artworks.

To date, the project has achieved significant progress, including: 1. The completion of the framework, including the code and the basic UI, which has already achieved the functional goal for the project. 2. The establishment of an evaluation system that will be used to evaluate the generated images. For the next step, more attention will be paid to achieving the two research goals and generating solid outcomes through the image generating system "化诗入画" (such as printed collections of images, an online gallery, etc.).