Digital Technology Helps Promote the Culture of Bronze Ware

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Abstract: Utilize open-source artificial intelligence platform APIs to obtain access token tokens and achieve artificial intelligence generation and editing of materials. Using Wen Xin AI technology to generate bronze artifacts. The development engine uses the World Wide Web version, which only requires filling out an Excel spreadsheet to achieve development. The Bronze Ware Park is divided into five exhibition halls. AIGC has designed the Bronze Ware Park and designed five halls one by one. The homepage of the works features five buttons, including background music, exhibition introduction, character roaming, camera rotation, appearance and hiding, video playback, highlighting, and knowledge Q&A. Successfully developed VR works to promote the culture of bronze ware.

Keywords artificial intelligence; virtual reality; AIGC; bronze ware; world wide engine national leaders

Introduction

National leaders have repeatedly proposed and emphasized the importance of strengthening cultural confidence, deepening academic research, innovating exhibitions and exhibitions, promoting the revitalization and utilization of cultural relics, promoting cultural exchange and mutual learning, and safeguarding, inheriting, and showcasing the excellent achievements of Chinese civilization. In ancient Chinese etiquette, bronze ware played an important role. The Xia, Shang, and Zhou dynasties were the heyday of bronze ware manufacturing in China. The three generations of bronze ware were loved by people for their unique shapes, exquisite patterns, and elegant inscriptions. Figure 1 shows some exhibits of ancient Chinese bronze artifacts.

Figure 1 China's splendid ancient bronze culture

1 Artificial intelligence solutions for materials

The materials used for developing virtual reality VR works include images, text, voice, video, etc. They are generated using AI generated AIGC technology and are also used for AI based editing.

1.1 Artificial intelligence generating AIGC technology for materials

The generation of work content evolved from professional PGC and user generated UGC to artificial intelligence generated AIGC.

The key code for Wen Xin's painting is,

```
input_dict={"text":prompt,  "style":fengge,
"resolution":chicun，"number":shu}
rst = TextToImage.create(**input_dict)
print(rst)
```

Figure 2 shows the artificial intelligence AIGC generated result of the prompt word prompt="ancient Chinese bronze ware, plate".

Figure 2 Ancient Chinese bronzes produced by Baidu Wenxin AI AIGC

2 Development practice of web version bronze vr works

2.1 Selection of development engine

Figure 3 is the logical relationship diagram of the World Wide Web version engine.

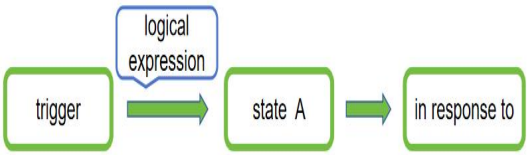

Figure 3 Logic diagram of VeryEngine

The World Wide Engine uses Excel as the development script, where users fill in objects, states, triggers, and responses in a specified format, and through the free combination of triggers and responses, complex program logic is achieved.

2.2 Park design

The park is divided into five exhibition halls: General Education Hall, Theme Hall, Country Hall, Technology Hall, and Information Hall, each of which is further divided into several exhibition rooms.

Figure 4 is the initial draft of the bronze ware park designed by the project team using AIGC technology,

and detailed design will be carried out on this basis in the later stage.

Figure 4 Preliminary design draft for bronze ware park (Hugging Face AIGC Technology)

2.3 Functional realization

2.3.1 Process design

1） There are five exhibition hall names on the homepage. Clicking on one of them will take you to the exhibition hall. After entering the exhibition hall, background music will automatically play. Click the "Background Sound" button to play and stop music.

2） Operate the keyboard to achieve character roaming in the venue. When a character approaches an exhibit, the exhibit highlights and automatically plays its introduction. Users can choose one or more methods such as text, voice, images, and videos. When leaving the exhibit, the highlight and introduction will end.

2.3.2 Home page design

There are 5 buttons for venue names on the homepage. When the mouse moves over one of these buttons, the button turns red and highlights the corresponding venue name. Figure 5 is the homepage of VR works.

Figure 5 The Entrance of "Hello, Bronze" VR Works (In Chinese)

2.3.3 Exhibition introduction voice

The code for the introduction voice of the exhibits is， *WindowsVoice, *voiceStr*. Among them, *VoiceStr is the text to be converted into speech.

2.3.4 Role roaming

Switch to a roaming camera in the focus camera state and use the roaming camera code to achieve scene roaming. The code is:*Active_Camera, Main Camera, Camera1*.

2.3.5 Appearance and hiding of text/images

The code is:*GUI_Enable,2D canvas. Container, true.*

2.3.6 Highlight

The object highlighting code is: *OutlineHighlight,* Boolean, greenBox2, (255,0,0), (0,255,0), 0.5, false.*

2.3.7 Knowledge Q&A

The knowledge Q&A code is:GUI_Control, *keyStr,2D canvas,1: the first book,(2: the second book,The third book).

Figure 5 shows the "Knowledge Q&A" interface. When the user moves the mouse over a button for a certain answer, the button will turn red.

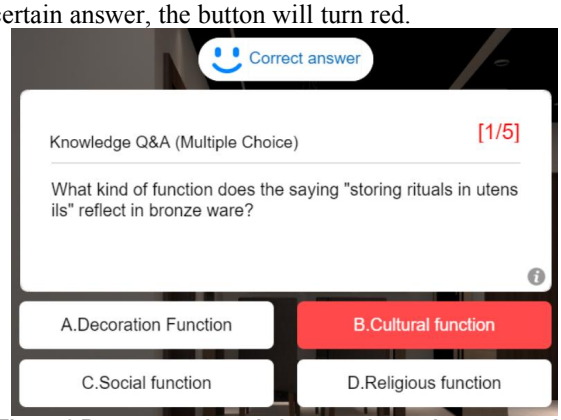

Figure 6 Bronze ware knowledge question and answer set in the World Wide Engine

3 Conclusion

We have prepared VR materials using artificial intelligence technology and developed "Hello, Bronze Ware" VR works using the World Wide Web version engine, which combines education with entertainment and promotes traditional Chinese culture.

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