CMPT 475 Assignment 2

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2022/2/16

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| Id | User Story |
|  | As a conference speaker, I want to be able to render the 3D model in all directions, so I can display the model more intuitively and make it easier for other participants to understand. (3 weeks, 15 days) |
|  | |  |  |  | | --- | --- | --- | | Id | Tasks | Days | | (1) | Write about model transfer system (UI interface design) | 2.5 days | | (2) | Write about model transfer system that reads the source code and renders it into a viewable view | 1 days | | (3) | Prepare transmission system drawing base components | 2 days | | (4) | Write transport system backend logic | 3 days | | (5) | Design Metaverse Conference Real Time Rendering System | 3 days | | (6) | Record participants' common control gesture information and store it in the cloud | 1.5 days | | (7) | Identify and capture key information on participants' hands | 2 days | | (8) | Can respond accordingly (zoom in, zoom out, move) by recognizing the gesture information of the participants | 3 days | | (9) | Improve the sensitivity and accuracy of each item to ensure that users can use it more efficiently | 1.5 days | | Total: 2.5+1+2+3+3+1.5+2+3+1.5 = 19.5 days | | 19.5 days | | Total number of days of each user story: 15 days  Total number of days of summation tasks: 19.5 days  Difference between the number of days: 19.5 – 15 = 4.5 days  Relative error: | | | |
|  | As a virtual meeting attendee, I want to customize the appearance and voice of the virtual characters, so I can be more involved in meetings. (1.5 weeks,7.5 days ) |
|  | |  |  |  | | --- | --- | --- | | Id | Tasks | Days | | (1) | Write user-defined interface (UI design) | 1.5 days | | (2) | Write pre-selection of makeup design composition commonly used by virtual characters | 1.5 day | | (3) | Create an interface mode for visually impaired people (better showing the details of the display) | 1 days | | (4) | Write a library of common actions for virtual characters and bind them with specific instructions | 2 days | | (5) | Write the user language database, and can select the most similar pre-stored audio for the users’ voice | 2 days | | (6) | Render virtual characters according to the user-defined look | 2 days | | (7) | Adjust virtual characters movement coordination, debug and modify details | 1 days | | Total: 1.5+1.5+1+2+2+2+1 = 11 days | | 11 days | | Total number of days of each user story: 7.5 days  Total number of days of summation tasks: 11 days  Difference between the number of days: 11 – 7.5 = 3.5 days  Relative error: | | | |
|  | As a virtual meeting attendee, I want to view my writing only through myself biometric authentication, so I can ensure the security and privacy of attending meetings. (2 weeks, 10 days) |
|  | |  |  |  | | --- | --- | --- | | Id | Tasks | Days | | (1) | Create double encryption process of fingerprint and password | 1.5 days | | (2) | The user can encrypt any file in the selection bar (the default is encrypted) | 1.5 days | | (3) | Users can choose to share files with other users, adding their personal information to a whitelist. Users who are not whitelisted will only see a blank space. | 3 days | | (4) | Every period of time, the system will automatically identify whether the user's basic information is in the whitelist. (Facial Recognition) | 3 days | | (5) | Use SSL file encryption to increase security when sharing files with others | 1 days | | (6) | When a security breach or malicious damage to files is detected, the files are automatically backed up in the cloud and the user is prompted | 3 days | | Total: 1.5+1.5+3+3+1+3 = 13 days | | 13 days | | Total number of days of each user story: 10 days  Total number of days of summation tasks: 13 days  Difference between the number of days: 13 – 10 = 3 days  Relative error: | | | |
|  | As a virtual meeting attendee, I want to record the meeting while I'm in the meeting and play it back from a different perspective, so I can give a more complete experience when reviewing meetings for people who didn't show up. (3 weeks, 15 days) |
|  | |  |  |  | | --- | --- | --- | | Id | Tasks | Days | | (1) | Writing an interface for viewing conference playback with selectable viewpoints (UI design) | 1 days | | (2) | Writing a function to record a conference | 1 day | | (3) | Simultaneous recording of a conference using a multi-track view | 3 days | | (4) | High-resolution rendering of recorded images and user-adjustable resolution | 1 day | | (5) | Save video tracks simultaneously and compress them independently | 1 days | | (6) | Some basic viewing playback functions, authoring volume adjustment, progress bar function, pause and multiplier functions | 1 day | | (7) | Possibility to merge video and audio tracks from different angles after the session | 3 days | | (8) | Compression of playback for ready transmission using efficient video compression technology | 1 day | | (9) | Encryption of recorded sessions to provide a uniform authorization method | 1 days | | (10) | Provide basic functions (pause, fast forward) when watching playback | 1 days | | (11) | Interfacing with VR glasses to allow playback of meetings using glasses to be immersive | 3 days | | (12) | Last modification details and debugging | 1 day | | Total: 1+1+3+1+1+1+3+1+1+1+3+1 =18 days | | 18 days | | Total number of days of each user story: 15 days  Total number of days of summation tasks: 18 days  Difference between the number of days: 18 – 15 = 3 days  Relative error: | | | |
|  | As a virtual meeting attendee, I want to modify the effect of meeting scene (background), so I can relieve my aesthetic fatigue from a long meeting and bring a different mood to all the participants. (1 weeks, 7 days) |
|  | |  |  |  | | --- | --- | --- | | Id | Tasks | Days | | (1) | Writing an operator interface where users can make changes to the conference background (UI design) | 1 days | | (2) | Automatic recognition and matching of user device functions, adjusting screen clarity according to the matching situation | 1 day | | (3) | Create a data library of preset default background scene materials | 1 day | | (4) | Rendering background effects with HD particle effects | 1 day | | (5) | Create a function that allows users to upload their own photos and automatically improve their color and quality based on the images. | 1 day | | (6) | Users can upload background music, and use the stereo surround sound processing | 1 days | | (7) | Adding sound effects and lighting according to different scenes, but making sure it doesn't affect the meeting experience | 1.5 days | | Total: 1+1+1+1+1+1+1.5+ = 7.5 days | | 7.5 days | | Total number of days of each user story: 7 days  Total number of days of summation tasks: 7.5 days  Difference between the number of days: 7.5 – 7 = 0.5 days  Relative error: | | | |
|  | As a virtual meeting attendee, I want to my virtual character could interact with other virtual character (pass file), so I can have a more relaxed and complete meeting experience. (3 weeks, 15 days) |
|  | |  |  |  | | --- | --- | --- | | Id | Tasks | Days | | (1) | Write user-defined interaction interface (UI design) | 1.5 days | | (2) | Write user-defined interface logic section | 1 day | | (3) | Write avatars with the option to print when writing documents | 1 day | | (4) | Write user basic action module with customizable interactions (gestures, etc.) | 3 days | | (5) | Option to share directly to the other party's mailbox function when the avatar is delivering a file | 1 day | | (6) | Option to share private channels when chatting with each other, voice signals are transmitted only between the user and the selected target | 2.5 days | | (7) | Possibility to send some emoticons, the sent emoticons will have a moving animation | 1 day | | (8) | You can set to focus mode when giving a speech, all users will receive your voice more loudly | 1 day | | (9) | You can perform basic actions such as shaking hands, nodding, shaking heads, hugging, cheering, etc. to other virtual users | 3 days | | (10) | Ability to share linked videos, etc. when interacting with other avatars (only visible to both parties) | 2 days | | (11) | Last modification details and debugging | 1 day | | Total: 1.5+1+1+3+1+2.5+1+1+3+2+1 = 18 days | | 18 days | | Total number of days of each user story: 15 days  Total number of days of summation tasks: 18 days  Difference between the number of days: 18 – 15 = 3 days  Relative error: | | | |
|  | As a virtual meeting attendee, I want to be able to perform operations linked to reality in virtual meetings, (such as printing files, Uber, or make video calls by using virtual characters), so I can get more done in virtual meetings without feeling disconnected from reality. (2.5 weeks, 12.5 days ) |
|  | |  |  |  |  | | --- | --- | --- | --- | | Id | Tasks | | Days | | (1) | Writing administrative interfaces linked to reality (UI design and back-end logic) | | 2 days | | (2) | Write API protocol for Uber that can be used in virtual meetings | | 1 day | | (3) | Secure access to Uber database and ability to call basic data to be displayed in virtual meetings | | 2 days | | (4) | Write API protocol for chat program to use some popular chat programs in virtual meetings | | 1 day | | (5) | Adding a series of protection measures such as anti-eavesdropping to increase the security level during the session | | 2 days | | (6) | Mapping avatars to the chat screen and reducing latency | | 2.5 days | | (7) | Add the ability to edit SMS and emails and receive and send emails in real-time | | 1 day | | (8) | Write a message alert window were all alert messages can be aggregated and centrally managed by the user | | 1 day | | (9) | Adding more security measures to the existing safety net to ensure the security of the user's data when using each application | | 3 days | | Total: 2+1+2+1+2+2.5+1+1+3 = 15.5 days | | 15.5 days | | | Total number of days of each user story: 12.5 days  Total number of days of summation tasks: 15.5 days  Difference between the number of days: 15.5 – 12.5 = 3 days  Relative error: | | | | |
|  | As a virtual meeting attendee, I want to translate other people's language into an understandable language in real time and render them according to their gender’s voice, so I can communicate with people all over the world without reading subtitles (2 weeks, 10 days) |
|  | |  |  |  | | --- | --- | --- | | Id | Tasks | Days | | (1) | Write interface to select translation language (UI design and logic) | 1.5 days | | (2) | Embedding automatic translation program with neural network machine translation | 3 days | | (3) | Import speech recognition system, double analysis of user’s voice as well as language. | 3 days | | (4) | Create a voice library and add some default voices. | 1 day | | (5) | Quickly render the other voice and read the translated content. | 3 days | | (6) | Reduce user waiting time and minimize delays on both sides | 1.5 days | | (7) | Intelligently recognize the language spoken by the user, using neutral translation methods for terms and special nouns, and semi-masking for swear words. | 1 day | | Total: 1.5+3+3+1+3+1.5+1 = 14 days | | 14 days | | Total number of days of each user story: 10 days  Total number of days of summation tasks: 14 days  Difference between the number of days: 14 – 10 = 4 days  Relative error: | | | |
|  | As a virtual meeting attendee, I want to adding the friends after the office meeting, so I can expand my social hub and chat with each other in a more interesting way. (1.5 weeks, 7.5 days) |
|  | |  |  |  | | --- | --- | --- | | Id | Tasks | Days | | (1) | Write friend management interface (UI design) | 1 day | | (2) | Create a friend system, social circle | 2 days | | (3) | Writing the ability to add friends by ID number or face-to-face click (button) | 2.5 days | | (4) | Creation of communication forum and simple functions (chat and conversation, one-click meeting) | 3 days | | (5) | Add better network security monitoring to ensure the safety of users' personal information | 2 days | | Total: 1+2+2.5+3+2 = 10.5 days | | 10.5 days | | Total number of days of each user story: 7.5 days  Total number of days of summation tasks: 10.5 days  Difference between the number of days: 10.5 – 7.5 = 3 days  Relative error: | | | |
|  | As a virtual meeting attendee, I want to have a virtual assistant, so I can quickly learn how to use Metaverse meetings app and can do some simple tasks for me. (3 weeks, 15 days) |
|  | |  |  |  | | --- | --- | --- | | Id | Tasks | Days | | (1) | Write admin page for virtual housekeeper (UI design, logic) | 1 day | | (2) | Create virtual butler's form design and voice (initial settings) | 1 day | | (3) | Capturing virtual butler's movements, designing basic facial expressions, etc. | 1 day | | (4) | Create a butler database that can be customized by the user | 1 day | | (5) | Write newbie orientation process and introduce all basic functions | 3 days | | (6) | Combine the newbie orientation process with the virtual butler to reduce latency | 3 days | | (7) | Write virtual housekeeper interface (UI design, logic) | 1 day | | (8) | Link the virtual butler with some ports of operation. Operations can be done through the virtual butler | 1.5 days | | (9) | Build voice command recognition for the virtual butler and respond to commands | 2 days | | (10) | Write and set the timer, teleprompter, stopwatch and other useful functions to the virtual butler library | 2 days | | Total: 1+1+1+1+3+3+1+1.5+2+2 = 16.5 days | | 16.5 days | | Total number of days of each user story: 15 days  Total number of days of summation tasks: 16.5 days  Difference between the number of days:16.5 – 15 = 1.5 days  Relative error: | | | |

Total relative error:

0.23076+0.31818+0.23076+0.16667+0.06666+0.16667+0.19354+0.28571+0.28571+0.090909 = 2.035569

Average relative error: