Live streaming platform-First presentation

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Distribution of work

Bingxiu Yu: Frontend Developer

- Develop the user interface (UI) for the live streaming platform.
- Integrate the video player and implement playback functionality.
- Create the chat feature and UI for displaying subtitles.

Chiajui Lee: Backend Developer

- Set up the backend environment and database.
- Develop APIs for stream management and user authentication.
- Integrate Azure Cognitive Services for real-time subtitles and manage chat functionality.

Guojun Zeng: Platform Setup (DevOps)

- Provision Azure resources (Blob Storage, CDN).
- Configure Azure for video streaming and global content delivery.
- Conduct stress testing and monitor platform performance.

Schedule

Task description	Start date	Finish date		October 2024													November 2024																				
			Progress	7 [1] 8	9 1	0 11	12 13	14	15 1	6 17	18 1	19 20	21 2	22 23	3 24	25 2	6 27	28 2	29 30	31	1 2	3	4	5 6	7	8 9	9 10	11	12 1	3 14	15 1	6 17	18 1	9 20	21 2	22 23	3 24 25
Azure service setup(Blob storage)	10/7/2024	10/14/2024	0%																																		
Research integrating OBS with Azure	10/7/2024	10/14/2024	0%							4							F						Н											-			
3 Integrate a video player with Azure	10/14/2024	10/21/2024	0%																																		
Use HLS and optimize CDN	10/14/2024	10/21/2024	0%																																		
Functional playback feature (optional)	10/14/2024	10/21/2024	0%									***							-				H				-					-		-			
5 Set CDN to stream in low- latency	10/21/2024	10/28/2024	0%							1																								+			
Build a platfrom UI/UX	10/21/2024	10/28/2024	0%			Н			H														Н									-		-			
Integrate Azure AD for login (optional)	10/28/2024	11/4/2024 [0%																																		
Build API to handle metadata	10/28/2024	11/4/2024 [8 0%							-							1										-							-			
10 Basic chat feature using Azure SignalR	11/04/2024	11/11	0%																1															ļ			
11 Subtitle using Azure Cognitive Service	11/11/2024	11/18/2024	0%														t						H				t										
12 Stress tests	11/11/2024	11/18/2024	0%																																		
13 Performance improvements	11/11/2024	11/18/2024	0%														1				-																
14 Final UI/UX improvements	11/18/2024	11/25/2024	0%																																		
15 Bug fixes	11/18/2024	11/25/2024	0%																																		

Expected features

Low-Latency Live Streaming:

• Supports low-latency streaming for real-time viewing.

Video Playback:

Integrated video player using HLS protocols for smooth playback.

User-Friendly Interface:

• Simple and intuitive UI for easy navigation and access to live streams.

Subtitle Support:

• Automatic real-time subtitles generated using speech-to-text services for enhanced accessibility.

Expected features

Optional User Login:

• Users can choose to log in using Azure AD, but it is not mandatory.

Real-Time Chat:

• Basic chat functionality for viewer interaction during live streams.

Stream Management:

• Streamers can easily start and stop live streams using tools like OBS

Global Streaming with CDN:

• Utilizes Azure CDN for fast and reliable streaming worldwide.