PERSONALIZED AI RECOMMENDATIONS

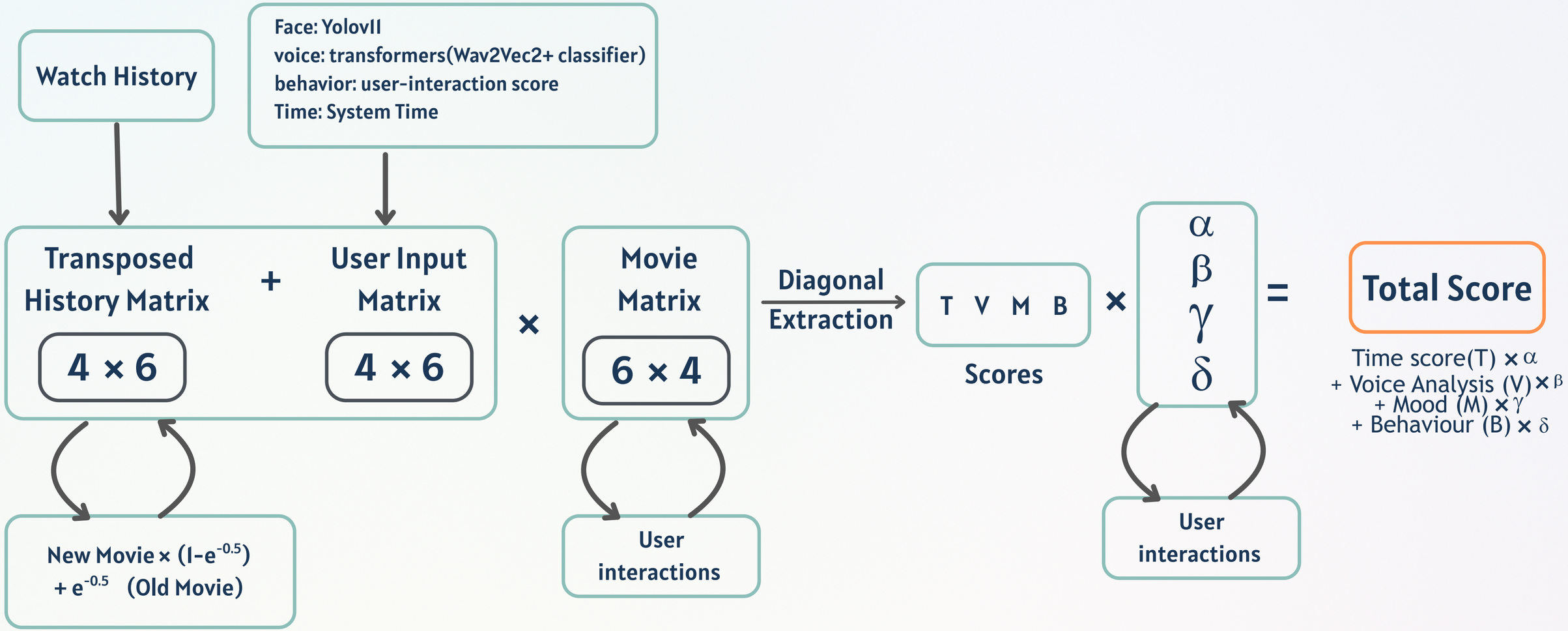
ANALYSIS

Time :	[Sunrise Boost,	Focus Flow,	Chill Zone,	Prime Time Magic,	Cozy Corner,	Night Owl Territory]
Face Analysis :	[Angry,	Fearful,	Happy,	Neutral,	Sad,	Background]
Voice Analysis :	[Angry,	Fearful,	Happy,	Neutral,	Sad,	Background]
Behavior :	[High Engagement,	Quick Browser,	Binge Watcher,	Accessibility User,	Content Switcher,	Social Viewer]

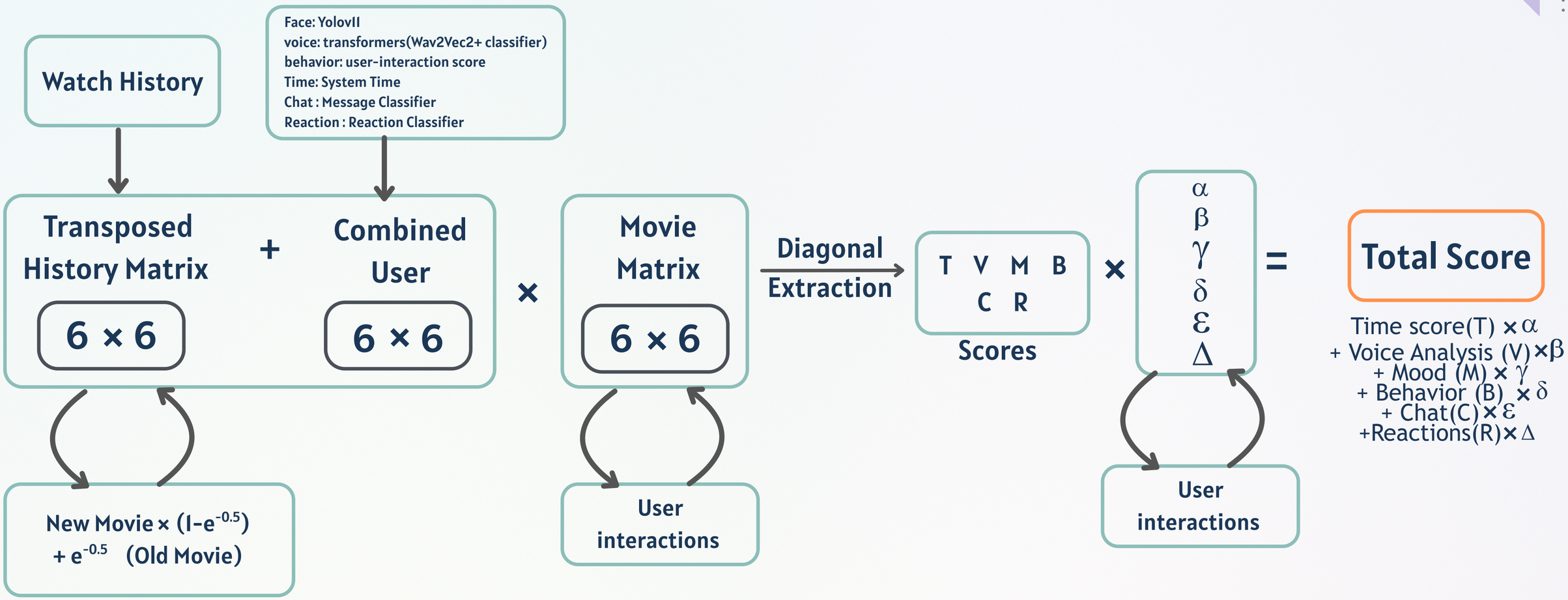
CONTENT AFFINITY MAPPING

- **Affinity Matrix:** Each movie or episode has a 6 × 4 matrix showing its relevance to each user state.
- **Initial Weights:** Set from prior knowledge — e.g., an action film leans toward Evening Prime, Angry/Happy, and High Engagement.
- **Dynamic Update:** Continuously adjusts during playback based on user interactions, reinforcing or decaying weights as needed.

PERSONALIZED AI RECOMMENDATIONS



ROOM RECOMMENDATIONS



- In group viewing, the system uses 6 factors (the original 4 plus Chat Activity and Reactions) to build a 6 × 6 group-state matrix.
- Purpose: Captures both individual context and live group mood.
- Content Matching: Each movie has a 6 × 6 affinity matrix, updated in real-time with chat and reactions.
- Benefit: Recommendations adapt dynamically to both personal states and shared room interactions.

SOCIAL WATCHING ACROSS FIRE TV DEVICES

APPROACH

- **Room management:** Host creates a room in the app, generating a unique Room ID; participants join by entering this ID on their Fire TV devices. Backend tracks all connected devices in real-time.

- **Real-time sync:** Use WebSockets for instant communication (<100 ms latency). When any user pauses or seeks, their device sends an event (e.g., {"action":"pause", "timestamp":123.45}); server broadcasts it to all devices in the room.

- **Playback alignment:** All devices load the same video source (deep link or URL) and use ExoPlayer (Fire TV's recommended player) for frame-accurate sync. Timestamps are resynced every 10 seconds using NTP time to avoid drift.

- **New join handling:** New devices receive current playback position, play/pause state, and video URI, then start playback at the exact synchronized timestamp.

SOCIAL WATCHING ACROSS OTT PLATFORMS

APPROACH 1

- **Content aggregation:** Create a backend service that pulls movie metadata from all platforms (Netflix, Hotstar, etc.) via their APIs.
- **Deep link mapping:** Map each movie to a platform-specific URI scheme (e.g., netflix://watch?title_id=123).
- **Intent launch:** Use Intent to launch your custom VideoPlayer Activity directly when a movie card is clicked.
- **Return handling:** When the user presses back, HomeActivity is set to singleInstance, so it won't reload, but onResume() will run to refresh the UI.

APPROACH 2

Stream content directly in your own player using platforms' APIs

API integration: API keys from each platform (Netflix Open Connect, Hotstar API), implement OAuth for user authentication

Content Retrieval: all platform API to get video stream info:

- **·GET /netflix/videos/{id}/manifest**
- **·Authorization: Bearer <token>**

DRM Handling: Use ExoPlayer with DRM setup (e.g., Widevine)

Player UX: full screen player with custom controls, Handle back press with finish() to return home