MeetAI Project Outputs

Feature/Component	Output	Destination	Format	Details
Real-Time Note-Taking (Smart Summarization)				
- Audio Capture (WebRTC)	Audio chunks	Node.js backend via Socket.io	Binary audio data (Blob/WAV)	Chunked audio segments ready for transcription.
- Transcription (Whisper)	Text transcriptions	Node.js backend, forwarded to frontend	Plain text string	Verbatim text of spoken content from audio chunks.
- Summarization (BART)	Summarized notes and action items	Node.js backend, forwarded to frontend	Plain text string	Concise summaries of transcriptions, e.g., key points or tasks.
- UI Display (React)	Rendered live notes	React frontend UI	HTML/JSX elements	Displayed in a scrolling "Live Notes" panel for users.
Video Conferencing Core				
- Real-Time Communication	Live audio/video streams	Participants' browsers via WebRTC	MediaStream (audio/video)	Real-time audio and video playback for all meeting participants.
- Meeting Rooms	Room status and participant updates	React frontend via Socket.io	JSON events	Updates like "User joined" or "Room locked" for meeting management.
AI Teaching Assistant				
- Real-Time Transcription & Translation	Transcriptions and translations	React frontend UI	Plain text string	Live text of spoken content, optionally translated into another language.
- Automated Quiz Generation	Quiz questions and options	React frontend UI	JSON object	Generated quizzes based on meeting content, displayed in a modal or panel.
- Student Engagement Analytics	Engagement scores	React frontend UI	JSON object	Metrics like attention levels per participant, shown alongside video streams.
AI Coworking Tools				
- Smart Summarization	Summarized notes and action items	React frontend UI	Plain text string	Same as note-taking feature, providing meeting summaries and tasks.

Feature/Component	Output	Destination	Format	Details
- Contextual Virtual Assistant	Responses to queries	React frontend chat widget	Plain text string	Answers to FAQs or context-based questions, displayed in a chat interface.
- Live Code Collaboration	Code suggestions	React collaborative editor (e.g., Monaco)	Plain text string	AI-generated code completions or suggestions, integrated into the editor.
AI Moderation				
- Detoxify & Timekeeping	Toxicity flags and time alerts	React frontend UI	JSON object	Alerts for toxic content in chat and time remaining updates, shown as notifications or text.

Additional Notes

- **Primary Output**: User-facing deliverables like notes, transcriptions, and analytics, rendered in the React UI.

- **Intermediate Outputs**: Data like audio chunks and transcriptions, used internally for further processing.

- **Storage**: Outputs (e.g., notes, transcriptions) can be saved in MongoDB for persistence.

- **Delivery**: Real-time outputs via Socket.io, on-demand outputs via REST API.

- **Processing**: Node.js coordinates outputs, with Python child processes for AI models (Whisper, BART).