

Collaborative Notes

A note-taking and sharing app for students and coworkers
Including a simple user interface and focusing on note-taking
Jacob MacLeod

Motivation

- Support collaboration in note taking
- Create accessible solution for notes
- Facilitate remote learning and remote work
 - Stay at home
 - 45% of U.S. employees working from home [1]
 - 25% working from home exclusively
 - Reduces workspace costs [2]
 - No commute time
 - Gives students and workers flexibility
 - Allows people to live where they want [3]

Solution

- Web application for sharing notes
- Desktop and mobile browser
- Al speech-to-text

Collaboration

- Collaborative note taking
- Users can share link to notepad
- Real-time update of collaborative notepad

- Supports collaboration for students taking notes and employees working remotely
- Like Google Workspace collaboration [4]

Speech-to-text

- Users can speak into microphone and dictate text
- From context menus or speech-to-text button

- Dictation available in Microsoft OneNote [5]
- Speech-to-text for other note-taking apps only from third-party plugins [6]

Al Text Summary

- Using AI, creates a summary of selected text
- From context menus or summarize button
- Writes summary text below users' text with summary header
- Microsoft OneNote with Windows 11 Copilot has this feature [7]
- Google Workspace for Business includes Gemini AI features including summarization [8] – [10]
- Editpad has Al summarizer [11]
- Other note-taking apps require third-party plugins. Popularity of these depends on the app [12] [14]

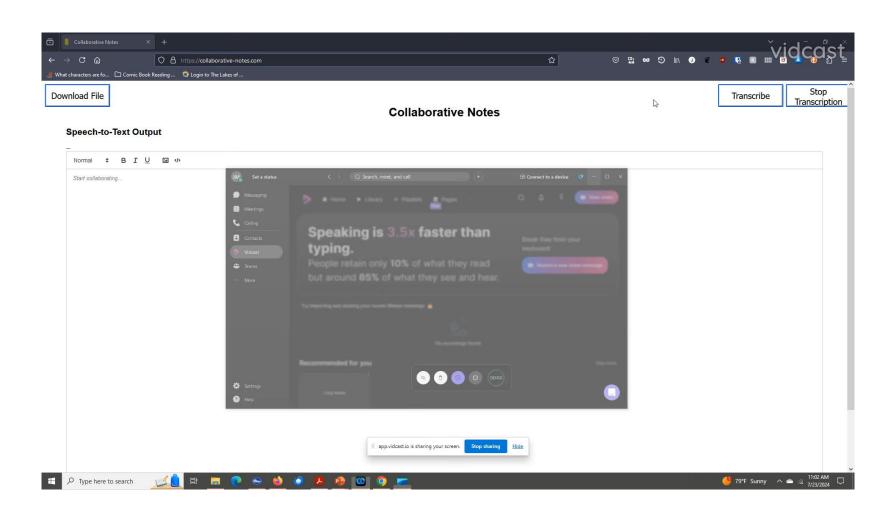
Current Status of Prototype

- Collaboration Implemented
 - Every user in same room on main page, no separate rooms

- Speech-to-Text Implemented
 - Output above editor, not connected to collaborative editor

AI Text Summary Not Implemented

Demo Video



Business Model

- Subscription-based service
 - Payment of monthly fee
 - Yearly subscription also available
 - Convenient for customer
 - Encourages improvement
 - Brand loyalty [19]

Team Contributions

 Jacob MacLeod: Developed server and browser frontend, set up connection server

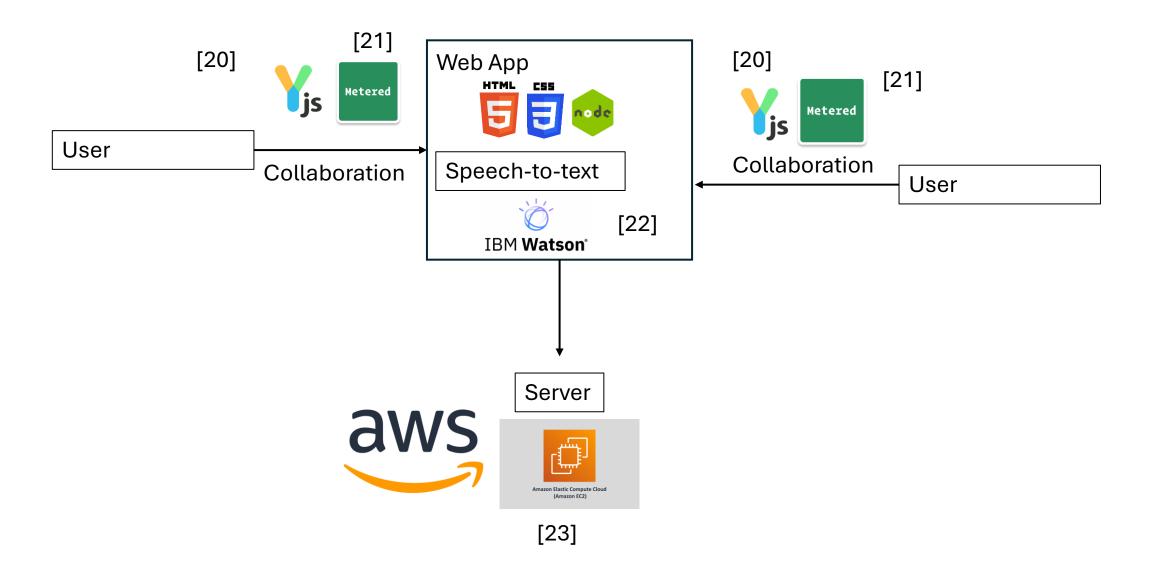
Plan for Implementation

Implement AI Text Summary

Implement creation of separate rooms for collaboration

Test collaboration feature on different networks

System Diagram



References

- [1] Lydia Saad and Ben Wigert. "Remote Work Persisting and Trending Permanent." Gallup.com. https://news.gallup.com/poll/355907/remote-work-persisting-trending-permanent.aspx
- [2] "How Remote Work Can Increase Business Profits." Forbes.com. https://www.forbes.com/sites/theyec/2021/10/13/how-remote-work-can-increase-business-profits/?sh=6eea5fc117b8
- [3] "The New Geography of Remote Work." Upwork.com. https://www.upwork.com/research/new-geography-of-remote-work
- [4] "Google Workspace." workspace.Google.com. https://workspace.google.com/
- [5] "Dictate your notes in OneNote." support.Microsoft.com. https://support.microsoft.com/en-us/office/dictate-your-notes-in-onenote-2f5d1549-afe1-4abd-95ff-829a839e3d00
- [6] Nik Danilov. "Speech-to-text in Obsidian using OpenAl Whisper." GitHub.com. https://github.com/nikdanilov/whisper-obsidian-plugin
- [7] "Summarize your OneNote notes with Copilot for Microsoft 365." support.Microsoft.com. https://support.microsoft.com/en-us/office/summarize-your-onenote-notes-with-copilot-for-microsoft-365-89e1f3cd-9cbc-4b34-84da-40d52b39aff5
- [8] "Gemini for Google Workspace." workspace.google.com. https://workspace.google.com/solutions/ai/

References

- [9] "Create Content with Gemini." cloudskillsboost.google. https://www.cloudskillsboost.google/paths/249/course_templates/914/video/484003
- [10] "Edit Prompts and Refine Text." cloudskillsboost.google. https://www.cloudskillsboost.google/paths/249/course_templates/914/video/484004
- [11] "Text Summarizer." Editpad.org. https://www.editpad.org/tool/text-summarizer
- [12] HahaBill. "Summarize your notes with Joplin AI!" discourse.joplinapp.org. https://discourse.joplinapp.org/t/summarize-your-notes-with-joplin-ai/36983
- [13] pchuer. "Plugin: GPT." discourse.joplinapp.org. https://discourse.joplinapp.org/t/plugin-gpt/30660
- [14] quentin_42fr. "Introducing Obsidian AI Assistant: Your Gateway to AI Models in Obsidian Notes." forum.Obsidian.md. https://forum.obsidian.md/t/introducing-obsidian-ai-assistant-your-gateway-to-ai-models-in-obsidian-notes/59437
- [15] "A Collaborative Editor." docs.yjs.dev. https://docs.yjs.dev/getting-started/a-collaborative-editor
- [16] SebTota. "Y-Webrtc Server." GitHub.com. https://github.com/SebTota/y-webrtc-server

References

- [17] "Watson-speech." npmjs.com. https://www.npmjs.com/package/watson-speech
- [18] IBM Watson APIs. "Speech JS SDK." GitHub.com. https://github.com/watson-developer-cloud/speech-javascript-sdk
- [19] Moira McCormick. "The Power of Subscription Pricing." Blackcurve.com. https://blog.blackcurve.com/the-power-of-subscription-pricing
- [20] "Yjs Shared Editing." Yjs.dev. https://yjs.dev/
- [21] "WebRTC Stun Turn Servers." metered.ca. https://www.metered.ca/stun-turn
- [22] "IBM Watson Speech to Text." IBM.com. https://www.ibm.com/products/speech-to-text
- [23] "Amazon EC2 Cloud Compute Capacity AWS." aws. Amazon.com. https://aws.amazon.com/ec2/