My direction

This book is a scaffold. **You** choose the direction, and everything you build is yours.

When I wrote “Neither”, I meant…

☐ I want to build it, but it isn't ready yet.

☐ I want to build it, but I don't want to enter a competition.

☐ I'm still deciding.

☐ Something else: _____

Build? Enter? (two separate choices)

☐ I want to build a speech-practice tool.

☐ I want to enter the Presidential SI Challenge with it (decide by 5 Dec).

If you enter: the project must be new — created specifically for the Challenge after 1 Aug 2026. Start a new repository; your earlier app is experience, not code.

One user, one moment

Who will use it, when, and what do they need to know after practicing? Describe them by role, not by name.

Name vote

☐ MicCheck

☐ Retake

☐ Speech Lab

☐ My idea: _____

(This names the teacher's reference tool. Your own app gets your own name.)

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Open the “Analyze” boxes

“AI analyzes it” is a start. For each box in your drawing: one input, one operation, one output.

Box	Input	What happens (rule or AI?)	Output (a number or a sentence)
1			
2			
3			

Rule or AI? Every step has a limit.

Step	Method	A limit I expect
Audio → text	speech-recognition model (AI)	
Words ÷ minutes	arithmetic rule	
Count um / uh	text rule	
Is the opening clear?	language model (AI) + quote	

What will the user see on the result screen? (three things)

Predict first, then run

A rate: words per minute

Words	Seconds	My prediction (wpm)	Result
120	60		
120	120		
120	30		
120	0		

Whole words, not pieces of words

Text	Count um/uh — my prediction	Result	Why
Um, this is, uh, useful. UM!			
The umbrella belongs to a human.			
I like music. Um, I play piano.			
My own counterexample:			

Experiment 3: who dropped the “um”?

Say a sentence with exactly three “um”s. App count: ____ . Transcript shows: ____ . My code missed it / the recognizer dropped it / other: _____

The boundary is part of the rule

Loudness, one number every 0.05 s. A pause = quiet frames in a row, between sounds. The kit's rule: a silence of **exactly** the minimum length counts (≥).

Minimum pause	Quiet run	Counts? (predict)	Result
0.60 s	0.55 s		
0.60 s	0.60 s		
0.60 s	1.20 s		

Would you choose ≥ or > for your app? Why?

A fair comparison

Attempt A and B are comparable only if: same task, same way of measuring, same kind of input. What else would you check?

Evidence: does “the quote exists” prove the judgment?

My evidence table

Your own voice first. Same task, same room. Five recordings find bugs; they don't prove the app works for everyone.

#	Task	Sec	Predict fillers	Me: fillers	App: fillers	Me: pauses	App: pauses	Noticed
1								
2								
3								
4								
5								

One mismatch I replayed, and what caused it

One thing these five recordings cannot tell me

Before anyone else tries it: tell them what's recorded, where it goes, who sees it, and how to stop. An adult arranges permission. Store numbers, not recordings.

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My result, my evidence, my next step

One observation the user should see

The exact evidence for it

One small thing to try next time

What I made · what I reused · what help I got (incl. every AI tool)

Explain your project in this order: the user → the input → the rule or model → the evidence → a limitation → the next change.