

Blind and Human: Exploring More Usable Audio CAPTCHA Designs

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Challenges with Audio CAPTCHAs

- ❖ High attention levels
 - ❖ Emphasis on working memory
 - ❖ Audio interference with Assistive Technology
 - ❖ Longer time to solve
 - Audio = 51 sec.
 - Visual = 9.8 sec.
 - ❖ Lower success rates
 - Audio = 50%
 - Visual = 93%
-

Our Prototypes

Control

Write down what you hear



A 3 C

Answer: A3C

Our designs

Math

Calculate the total



1 + 4

Answer: 5

Pauses

Write down what you hear



A 3 C

Answer: A3C

Character

Count the number of A's



A A 8

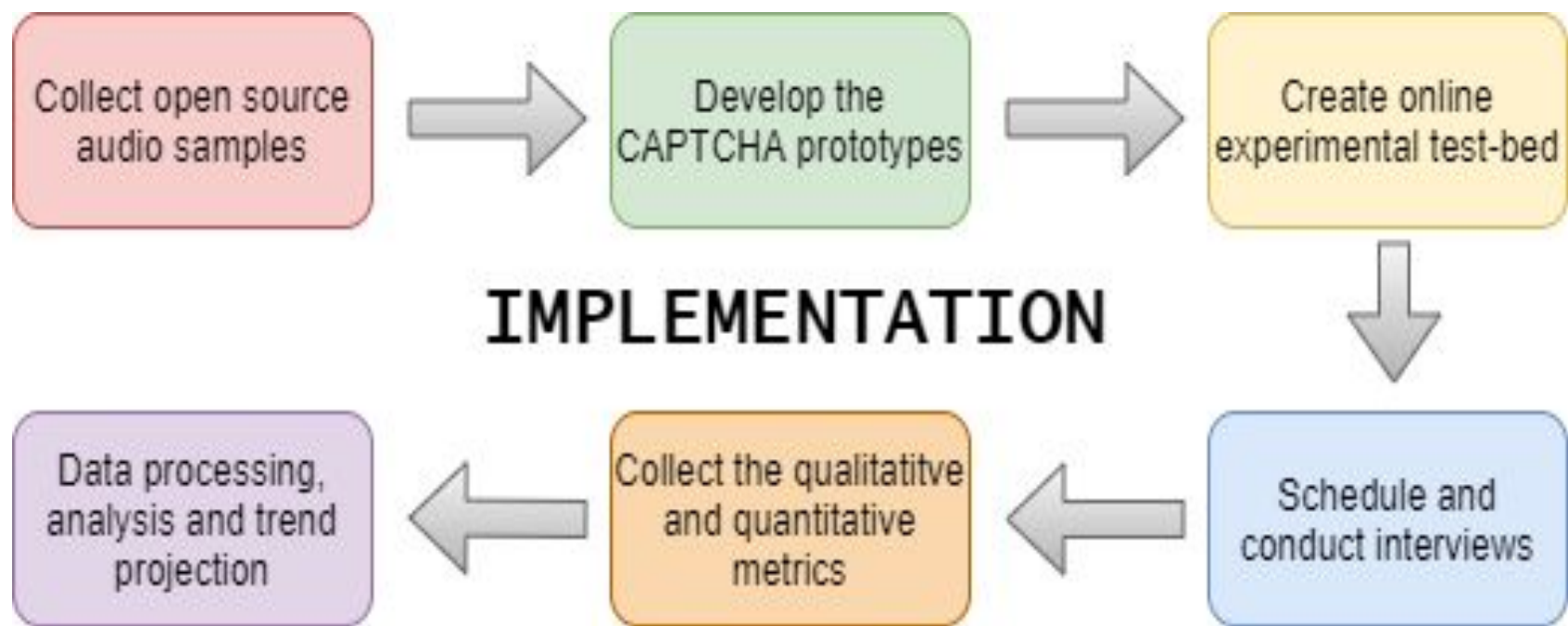
Answer: 2

Categories

Count the number of bird sounds



Answer: 2



Summary of Key Results

	Avg Accuracy	Avg Speed	Pref. to control	Security Random	Security NLP
Control	43%	53.6s	2.7%	++	-
Math	89%	31.7s	52%	+	+
Character	87%	32.7s	67%	-	+
Pauses	76%	35.4s	73%	++	-
Categories	70%	31.1s	61%	-	+

THANK YOU!

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