SafeTether — Startup Presentation

Oct 31, 2026 · @Habib

1. Startup overview

SafeTether

SafeTether is a low-cost anti-theft tracker built for people with disabilities: a tag on your bag, an anchor on your wrist, and an alert you can actually sense the moment they are pulled apart.

Name	SafeTether
Founded	July 2026
Founder	Habib Guliyev
Supported by	SUMbuilders
Sector	Assistive technology · personal safety hardware
Current stage	Working prototype
Website	habibguliyev.com
GitHub	github.com/habibguliyevv-stack/SafeTether

SUMBUILDERS

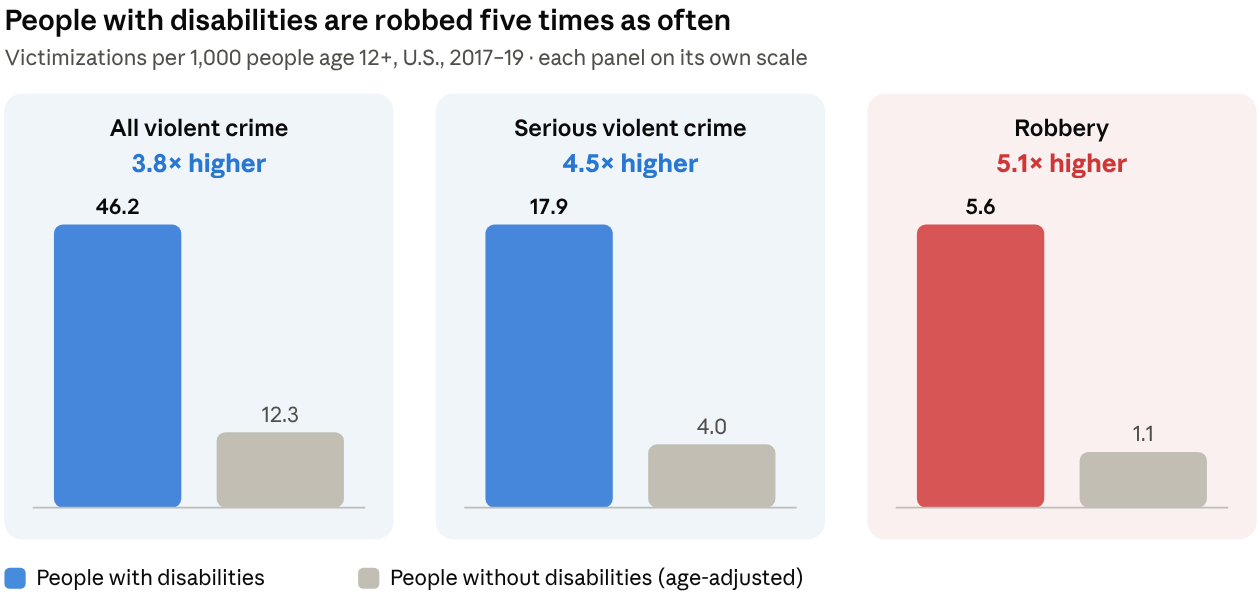
Supported by SUMbuilders.

Mission. Make sure a person who cannot see, hear, or chase a thief knows about a theft within seconds, safely.

Vision. A world where a disability is never the reason someone gets robbed, and where safety tech is designed for the people at the highest risk first, not last.

2. Problem and solution

The problem: people with disabilities are robbed about 5× as often, yet every tracker on the market is built to find a *lost* item later, not to warn you during a theft.



Source: Harrell (2021), BJS NCJ 301367, NCVS 2017–19

33% of U.S. robbery victims have a disability · only **45%** of those robberies reach the police · **1.3 billion** people worldwide live with a disability. *Sources: Harrell (2021); WHO (2023).*

The solution: a tag on the bag, an anchor on the wrist. If the item gets more than 1 m away, the device asks the user if they know. If they say no, it vibrates and shows where the item is. No phone needed.

What makes it different.

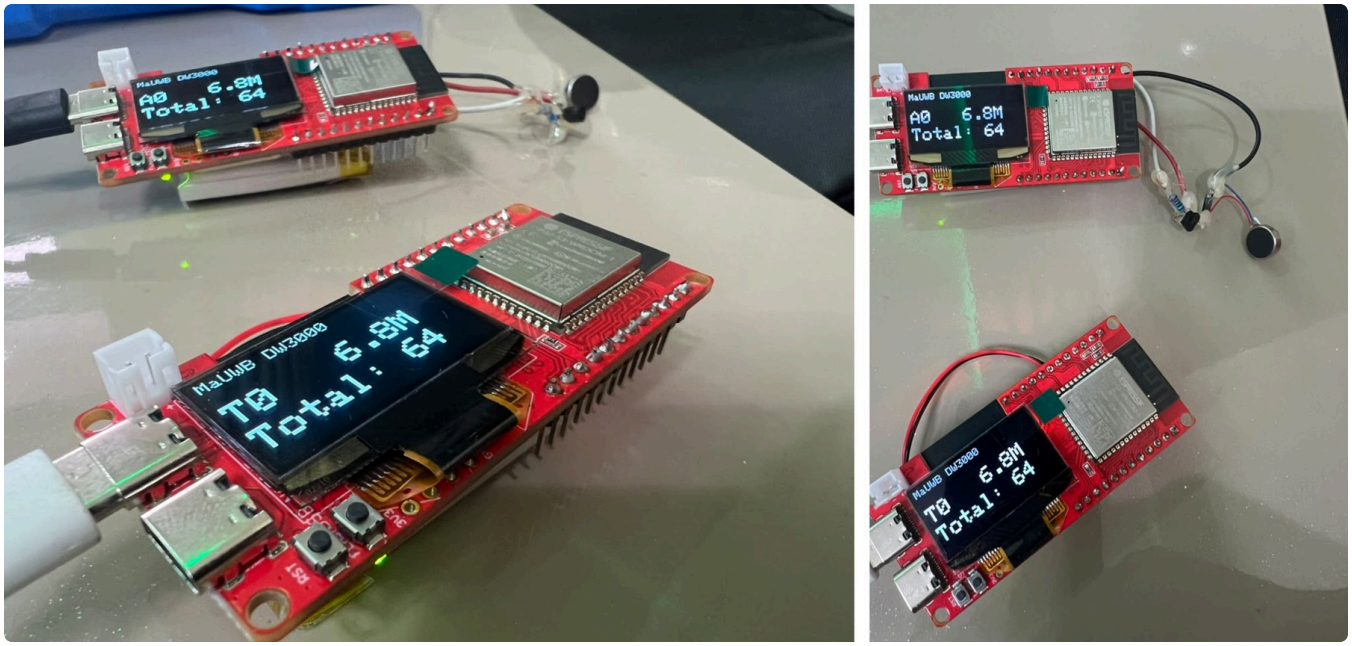
	Apple AirTag	SafeTether
Built for	Finding *lost* items	Reacting to *theft* in seconds

	Apple AirTag	SafeTether
Needs a smartphone	Yes (iPhone/iPad)	No
Alerts	Phone notification	Speech, vibration, or light — user's choice
Checks with the user	No	Yes, asks at 1 m, vibrates if the user didn't know
Recovery model	Owner goes to the item	Owner stays safe; help comes to them

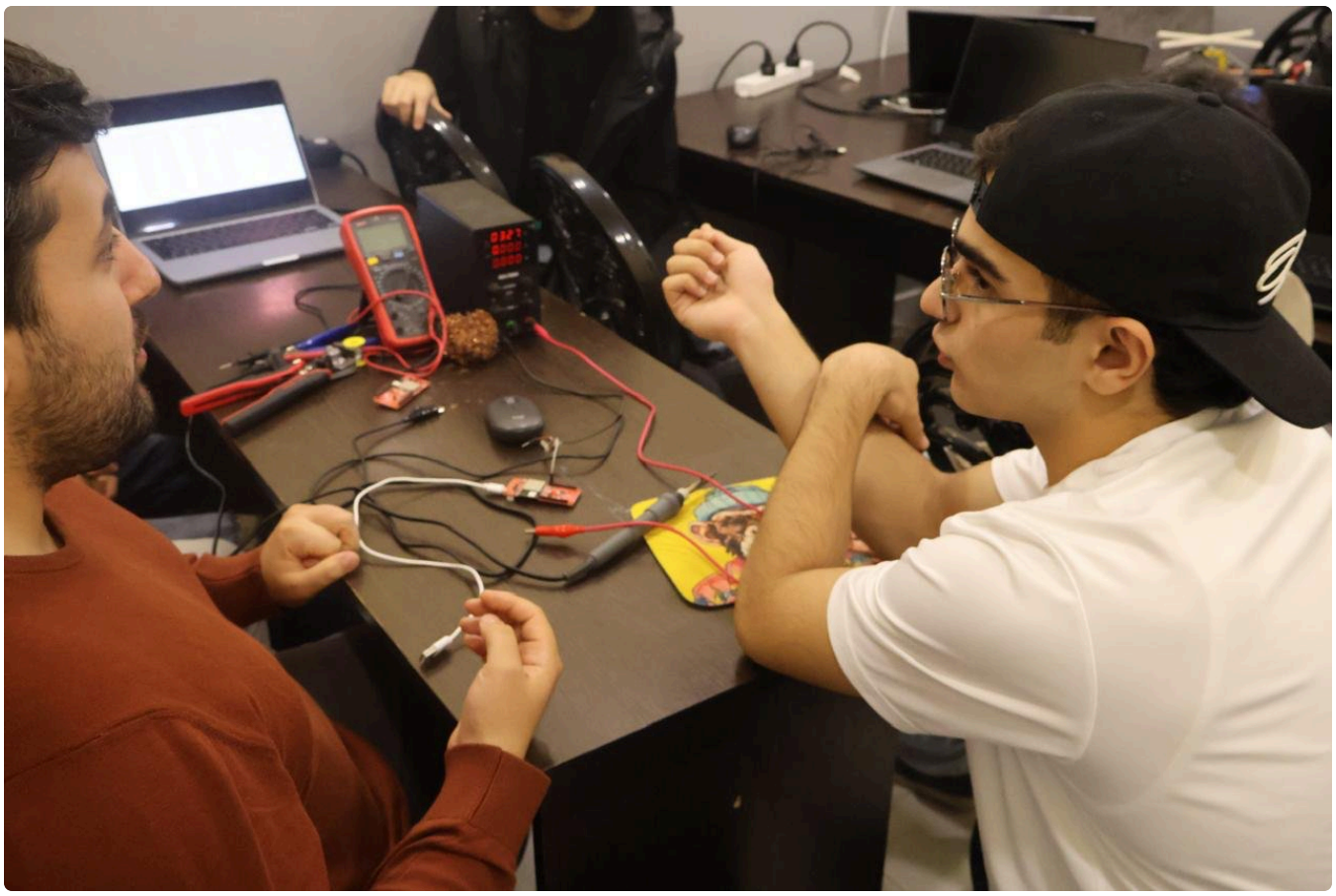
Core rule: help, not a chase. While the bag moves, SafeTether only says *stay where you are, help is coming*.

3. Product

Two parts: a **tag** on the bag and an **anchor** on the wrist.

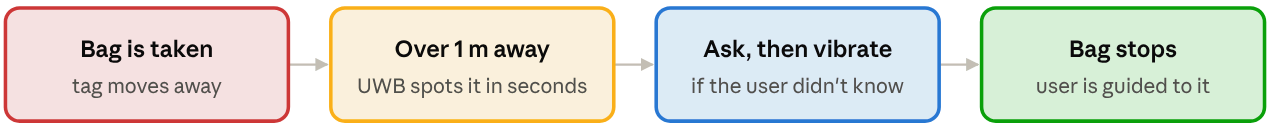


*The working prototype: the **A0 anchor** with its vibration motor and the **T0 tag**, shown from two angles.*

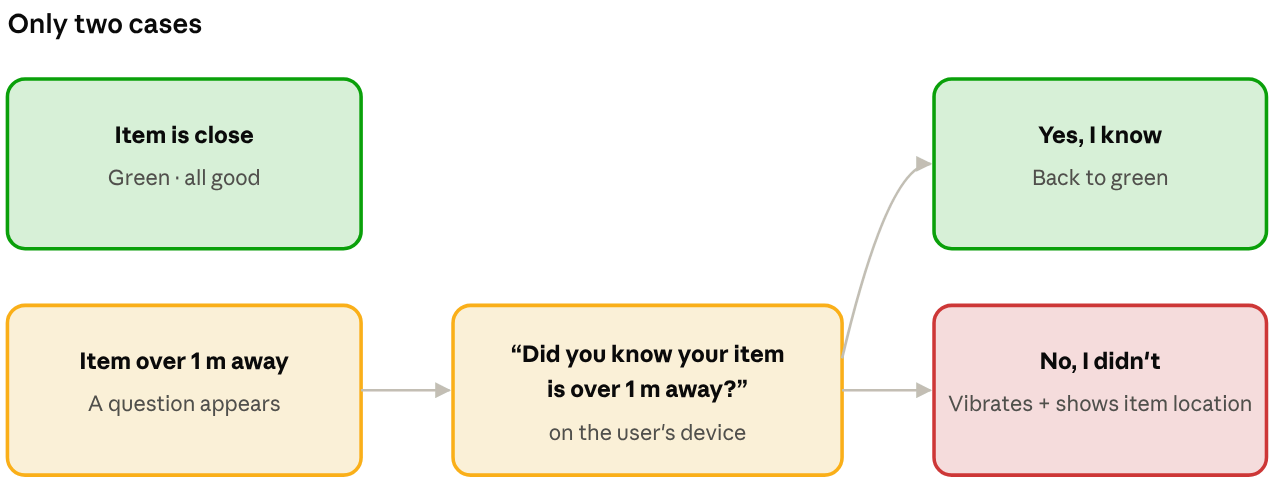


Working on the SafeTether prototype: the UWB boards, power supply, and multimeter on the bench.

SafeTether warns in seconds and never sends the user after a thief



How SafeTether works · 4 steps

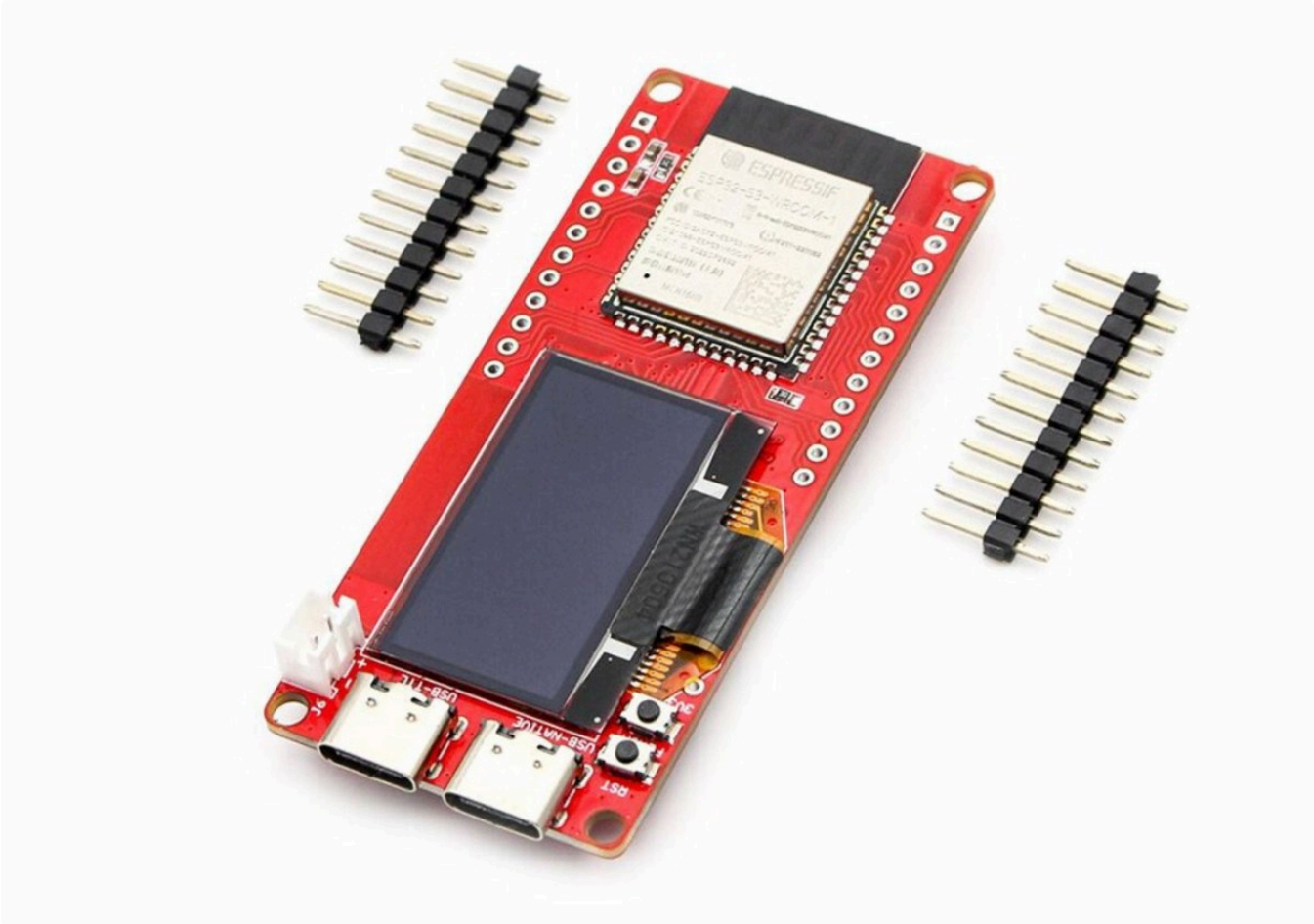


Distance zones · from the research paper

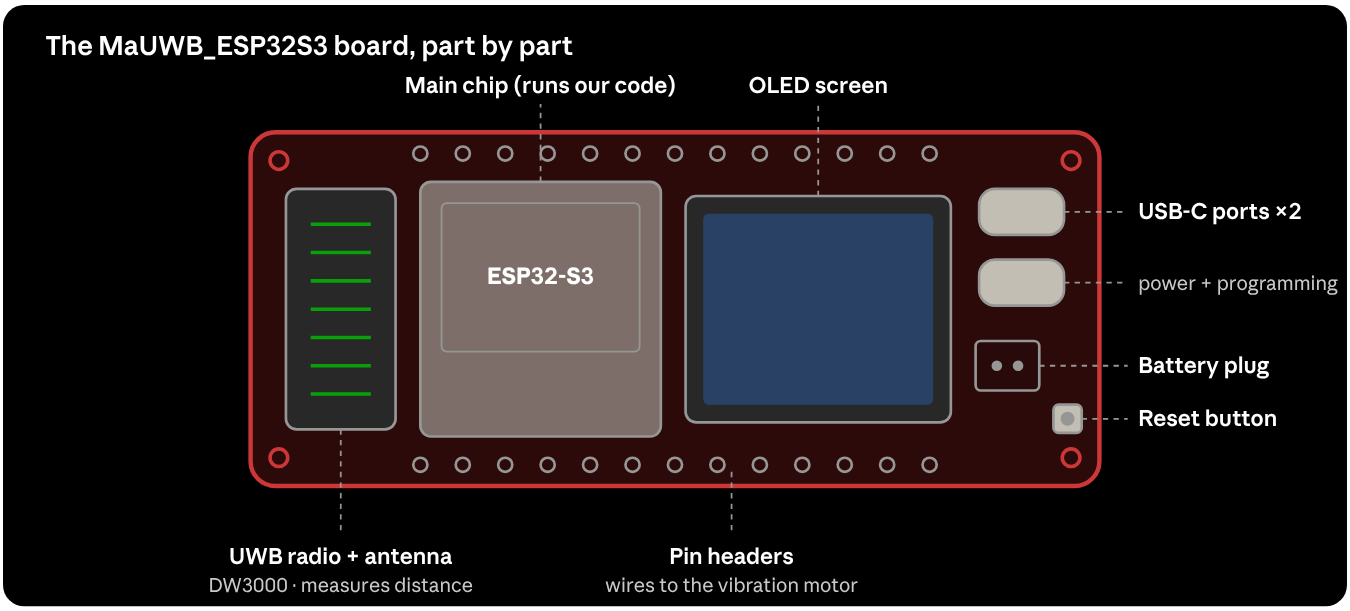
Main features

- **No phone needed:** tag + anchor work on their own
- **Alerts you can sense:** speech, vibration, or light, matched to the user's disability
- **Smart check at 1 m:** asks the user first; if they didn't know, it vibrates and shows the item's location
- **Help, not a chase:** the user stays safe; guidance starts only after the bag stops
- **Time-stamped log:** ready for a police report

Technology: Makerfabs MaUWB_ESP32S3 — an ESP32-S3 chip + a DW3000 Ultra-Wideband radio on one board.



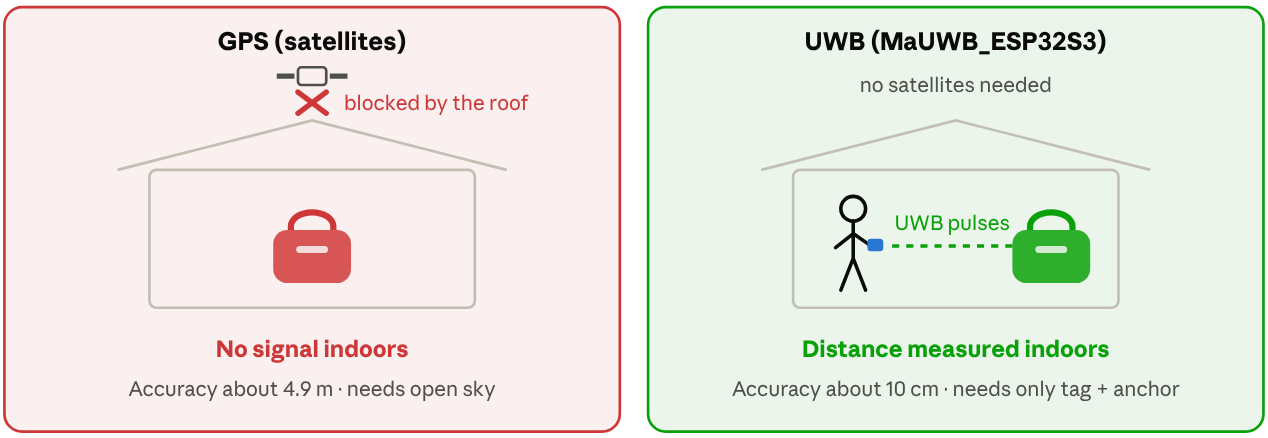
The UWB module used for SafeTether's ranging. Photo: Makerfabs.



Inside the UWB module · from the research paper and Makerfabs specs

Indoors, GPS loses the bag; UWB keeps measuring it

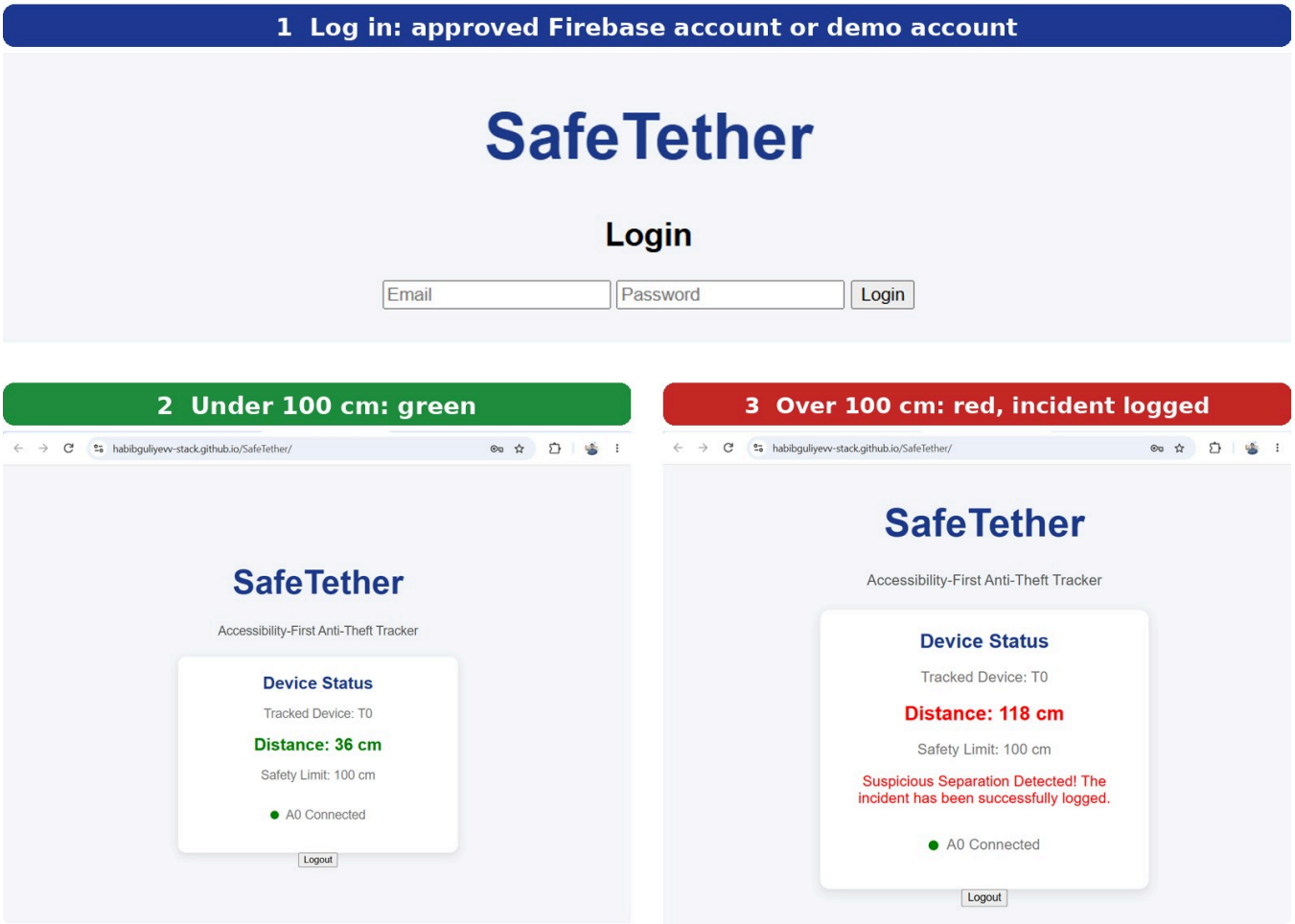
Why the prototype switched from GPS to Ultra-Wideband



GPS vs UWB · team tests and Makerfabs specs

Firmware: C++ (Arduino IDE) on the ESP32-S3; each board runs on a 3.7 V LiPo battery.

Live dashboard



The T0 tag sends the distance to **Firebase**; the website shows it live. To log in, use an approved Firebase account or the demo account below. If the boards are off, the site shows *No connection*.

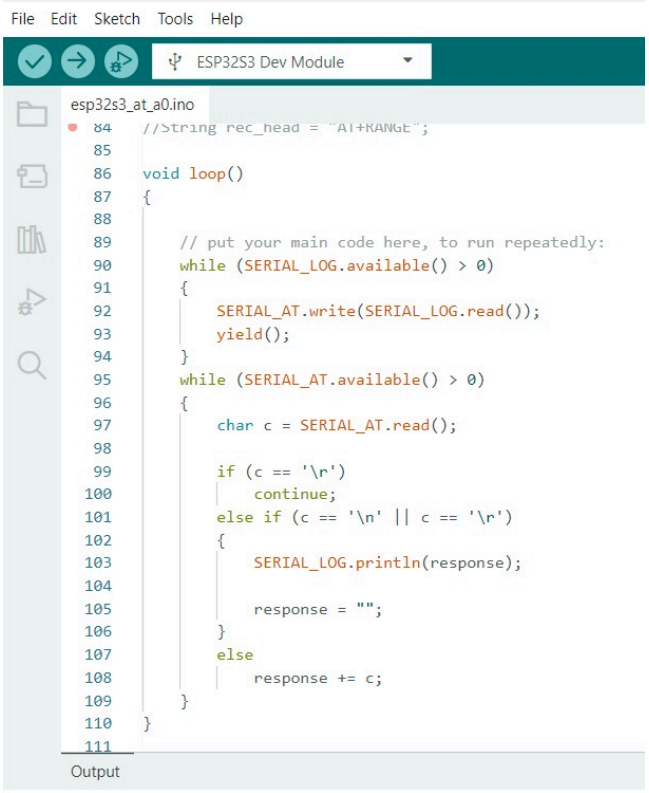
Demo login	
Website	habibguliyevv-stack.github.io/SafeTether
Email	`habibguliyevv@gmail.com`
Password	`inthewaytothestates983`

The code

T0 tag (on the item)



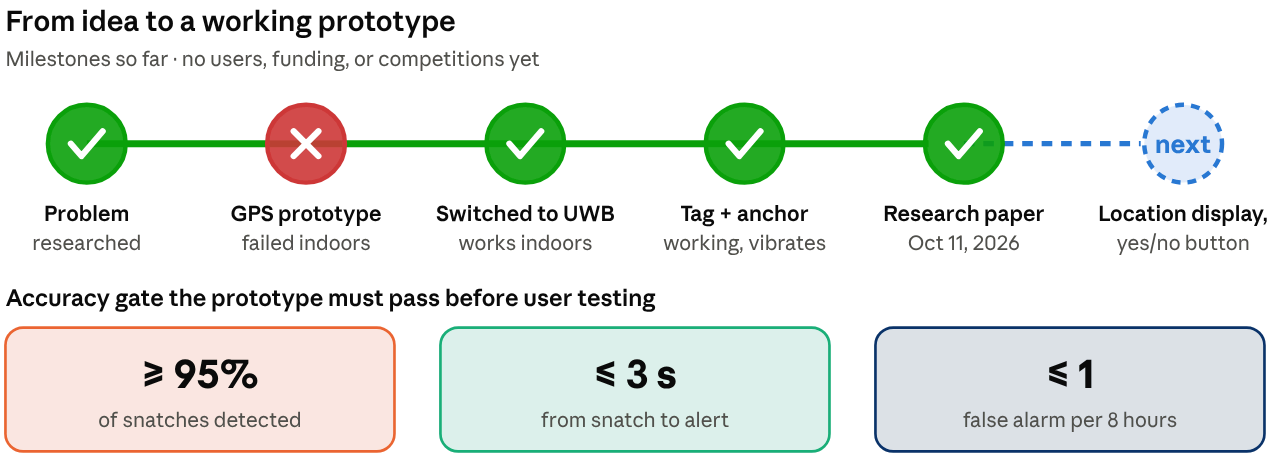
A0 anchor (with the user)



Board	File	Job
A0 anchor	`esp32s3_at_a0.ino`	Always with the user; talks to the tags
T0 tag	`esp32s3_at_t0.ino`	On the item; sends the distance to Firebase

Need to track more things? Add more tags (T1, T2, …), up to 64.

4. Progress and measurable results



SafeTether progress · October 2026



Testing the prototype and checking results on the laptop.

5. Team and individual contributions

Name	Role	Responsibilities
Habib Guliyev	Founder, project lead	Idea, research, prototype, testing, research paper
Tural Suleymanov	Coach and mentor; co-author; founder of SUMbuilders	Technical guidance, review of the research paper
Murat Abbasov	Contributor, feedback	Joined work sessions and suggested improvements to the prototype

Name	Role	Responsibilities
Farid Abdullayev	Contributor, feedback	Joined work sessions and suggested improvements to the prototype

My role: Founder

- **Built:** the GPS and UWB prototypes, firmware in C++
- **Led:** the switch to UWB, accessible alerts, the "help, not a chase" rule
- **Learned:** embedded programming, circuits, research design



SafeTether team work session.

6. Roadmap and future plans



SafeTether roadmap · phases not to scale

Who it's for first: blind and low-vision, deaf and hard-of-hearing, and mobility-impaired adults. **Long term:** a version for older adults and people with cognitive disabilities.

7. See it yourself

- **Code and how it works:** github.com/habibguliyevv-stack/SafeTether
- **Live dashboard:** habibguliyevv-stack.github.io/SafeTether
- **Portfolio:** habibguliyev.com

Demo login: `habibguliyevv@gmail.com` · password `inthewaytothestates983`. If the boards are off, the site shows *No connection*.