

Smart Home Monitoring Systems for Elderly Care

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Background



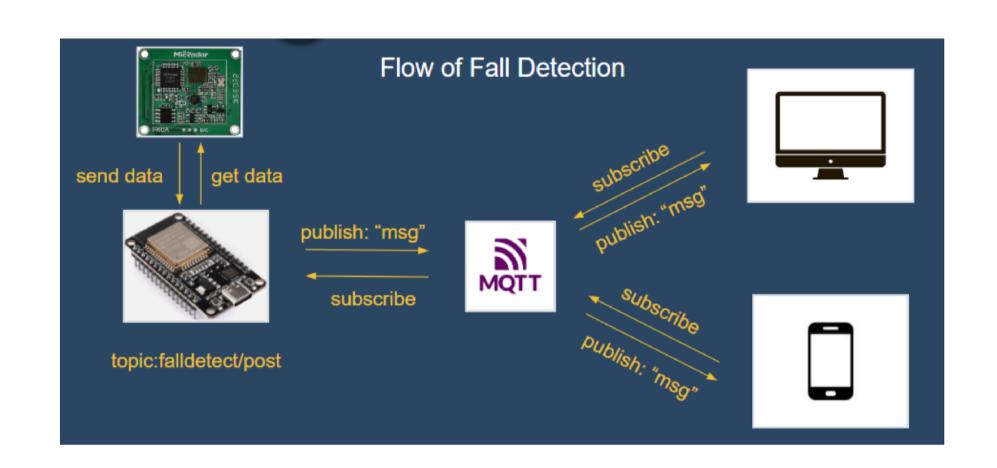
- Increased population ageing
- Elderly people living alone at home
- Accidents resulting in injury or even death
- Falls are the second leading cause of death
- Mainstream fall detection has some drawbacks

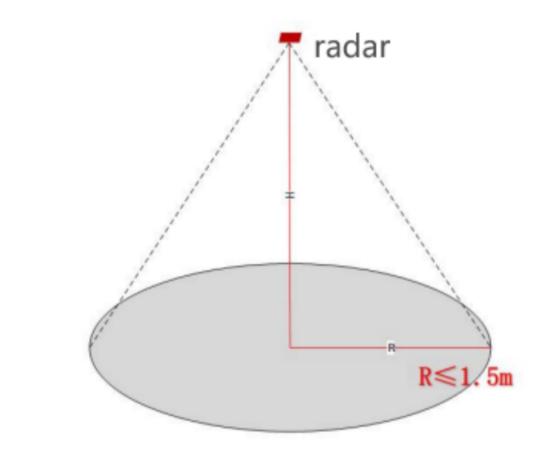
Methodology

Smart Home Monitoring System

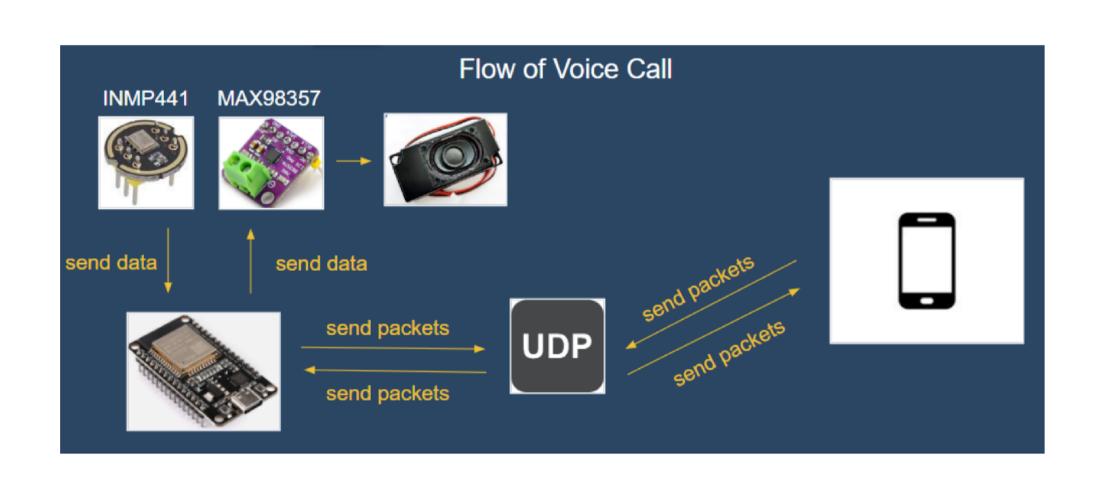
- 1. Fall Detection
- 2. Voice Call
- 3. Data Transmission Server
- 4. Mobile Application

Fall Detection

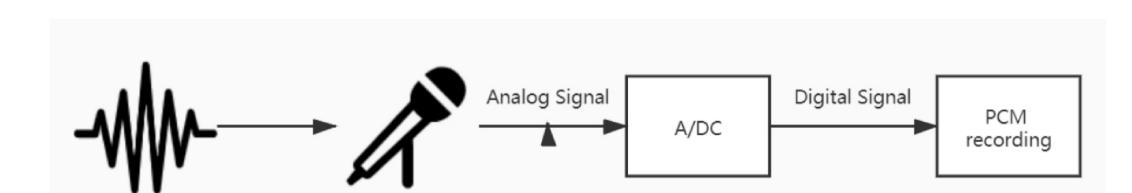




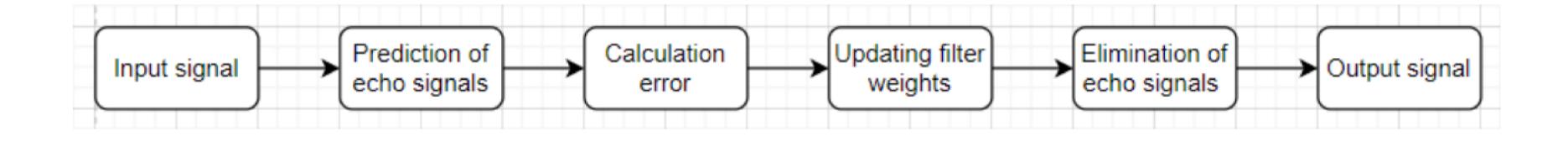
Voice Call



Sound Processing

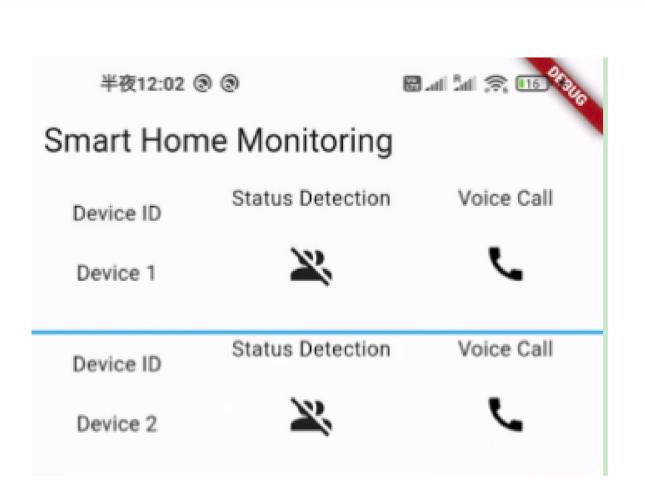


Echo Cancallation



Application

Case 1



Case 4

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Smart Home Monitoring						
Device ID	Status Detection	Voice Call				
Device 1	•	•				
Device ID	Status Detection	Voice Call				
Device 2	75	•				

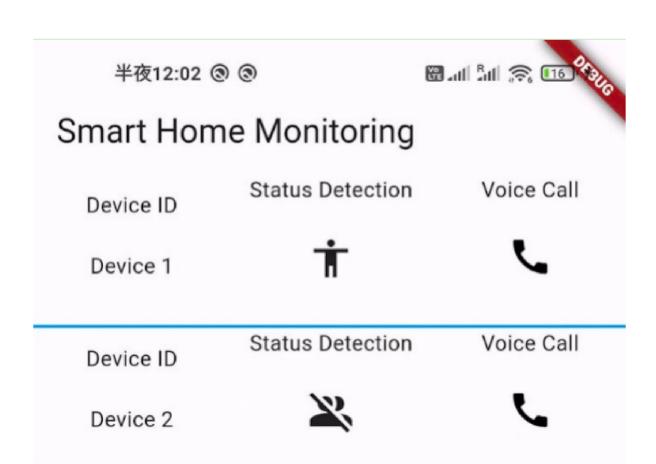
Case 2

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Device 1	Status Detection	Voice Call
Device ID Device 2	Status Detection	Voice Call

Case 5

Case 3					
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Smart Home Monitoring					
	Device ID	Status Detection	Voice Call		
	Device 1	•			
	Device ID	Status Detection	Voice Call		
	Device 2	2			

Case 3



Case 6

