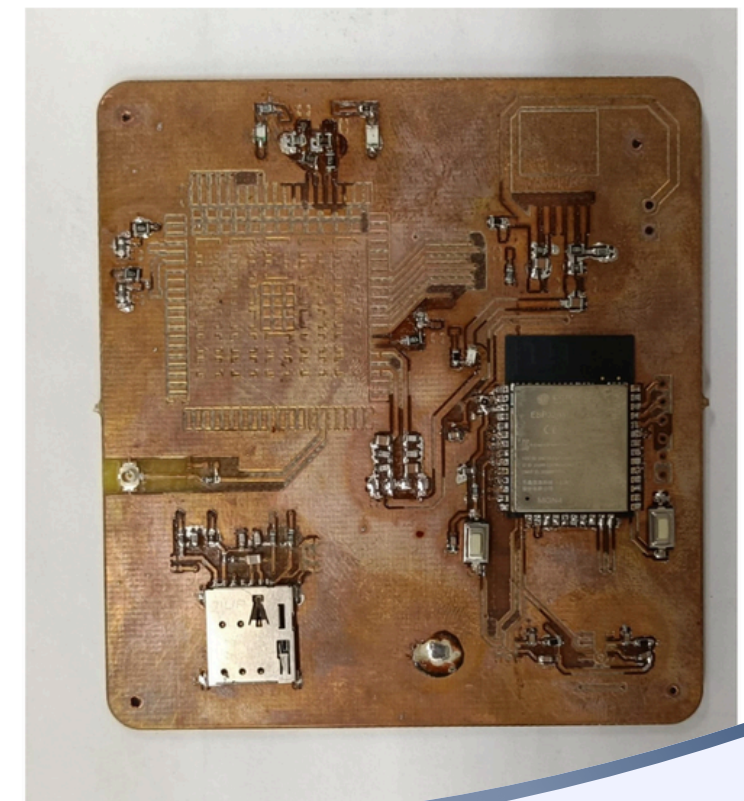
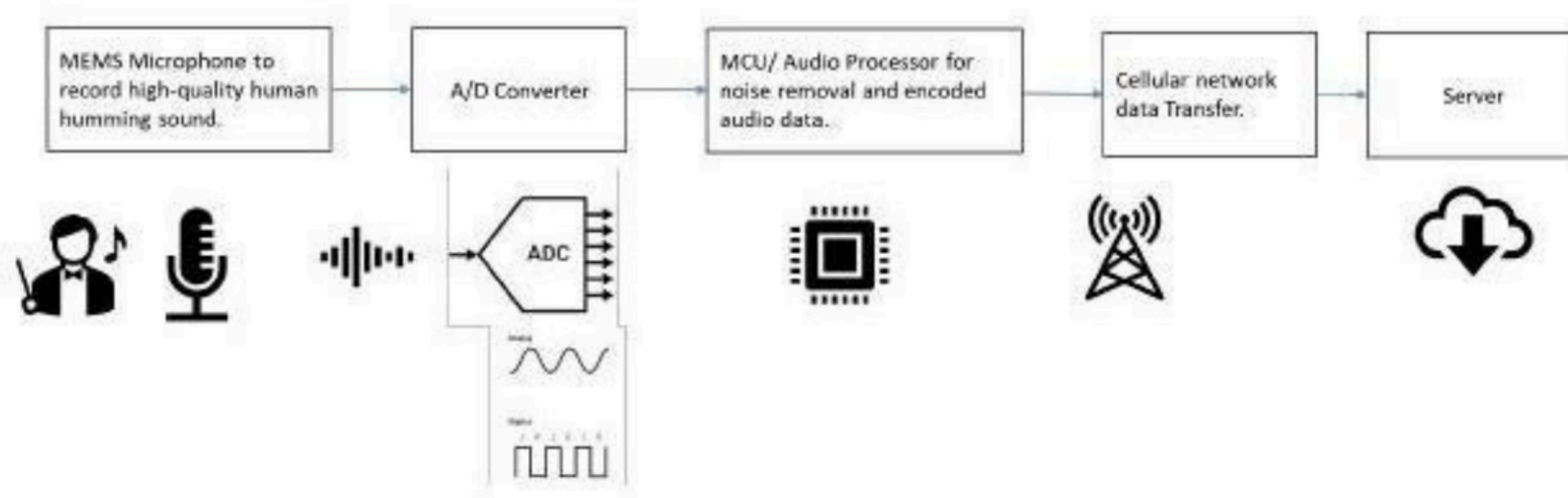


# PORTABLE SPECTROGRAM-BASED DEVICE FOR AIRWAY PATENCY ANALYSIS IN TELEHEALTH

Tech Atriocare Private Limited

Block Diagram of the Pockethum Device, as reviewed  
& finalized by mPRAGATI, IIT-Delhi experts



## Problem Statement

Chronic respiratory diseases account for approximately 6.4% of the total disease burden, primarily driven by conditions such as COPD and asthma. However, existing monitoring and management solutions are often invasive, ineffective, or inaccessible due to financial and logistical constraints, limiting timely diagnosis and continuous care.



Tarun Adarsh

## Technology

HAAL-CHAAL POKETHUM is a sleek, pocket-sized heart and lung wellness device that captures, processes, and analyzes humming voice signals to assess airway patency (AP) using a proprietary voice-signal processing algorithm. The device provides real-time results based on AP thresholds and seamlessly syncs with smartphones and cloud platforms to store voice data and generate longitudinal weekly health insights, enabling convenient at-home monitoring.

## Highlights

The solution offers a unique, integrated, and preventive approach to respiratory care, combining high user engagement with a sleek, portable design, ease of use, and personalized features. It captures a comprehensive and real-time view of heart and lung wellness synchrony, enabling better health insights. Additionally, it seamlessly integrates with telehealth services, allowing healthcare providers to remotely monitor patients during teleconsultations.