



ANVESHAN

INNOVATE EXPLORE TRANSFORM

24 Hour Hackathon

Team Name: LogicMinds

Team Leader's Name: Anandita Agnihotri

Team Members Name:

1. Kishan Ingallali

2. Piyush Sali

3. Adithi Vernekar

Institution:

KLE TECHNOLOGICAL UNIVERSITY, HUBLI

Problem statement

What we are solving:

- Passengers face difficulty to know how full a bus is before boarding and arriving buses, leading to overcrowded buses while others remain underused.
- This causes discomfort, delays, and inefficient transport utilization.

Urgency:

- With growing urban mobility, smart crowd management is essential for efficient, safe, and comfortable travel.



MOTIVATION AND IMPORTANCE

Why this problem matters:

- Overcrowding leads to discomfort and safety issues.
- Uneven bus utilization costs increased fuel consumption.
- For students, office workers, and families, these inefficiencies can disrupt routines and lower productivity.

Who is affected:

- Daily commuters, intercity travelers, students and transport operators.

Supporting facts:

- Average Indian city buses run at 120–150% capacity during rush hours.
- 30% of buses are underutilized at the same time.
- Smart mobility solutions can improve efficiency by 20–25%.



PROPOSED SOLUTION

A Smart Bus Alert System that monitors bus occupancy and displays live fill percentage on a public website for passengers.

Flow diagram:

Sensors → Data Processing → Cloud Database → Website Notification.

Key features:

- Real-time occupancy detection using sensors.
- Website displays live bus fill percentage, bus information and next-stop data.
- Alerts travelers when a bus is nearly full.
- Promotes even crowd distribution.
- Provides real time tracking of bus location.



INNOVATION AND UNIQUENESS

ASPECTS/FEATURE	EXISTING SOLUTION	OUR SOLUTION/APPROACH
Crowd distribution	No alert or balancing mechanism	Alerts passengers to choose less crowded busses.
Occupancy monitoring	Limited to manual checks	Automated real-time monitoring
Innovation factor	Basic monitoring	Smart, automated and publicly accessible solution
User focus	Focused on operators	Focused on passengers and travel comfort

Implementation Plan

- Week 1: Research & Design Finalize user needs, system requirements, architecture, and design mockups.
- Week 2: Development Build core modules: sensor integration, GPS tracking, real-time crowd estimation, and friend detection app logic.
- Week 3: Testing & Deployment Test all functionalities, fix bugs, prepare a demo/mock prototype, and compile final presentation.

Timeline: 3 Weeks → Research → Prototype → Testing → Deployment



IMPACT & BENEFITS:

Social impact:

- Reduces crowding ,improves crowd distribution and leads to a less stressful public transport experience.
- Saves time for commuters.
- Promotes public transport, reducing traffic and air pollution for healthier cities.

Economic impact:

- Optimizes fleet usage and reduces bus operational cost.
- Reduces travelling cost of commuters.

Technical impact:

- Promotes IoT and smart transportation.

Beneficiaries:

- Commuters, bus operators, and city transport authorities.



TEAM AND CONCLUSION

TEAM MEMBERS:

1. Anandita Agnihotri [Web developer]
2. Adithi Vernekar [IoT/Data integrater]
3. Kishan Ingallli [Hardware developer]
4. Piyush Sali [Designer]

One-liner:- Our idea deserves to win because it seamlessly combines smart crowd analytics and more personalized public transport experience for everyone.

