1

Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

5 minutes

PROBLEM

How to efficiently manage railway operation using advanced IoT approaches?

Key rules of brainstorming

To run an smooth and productive session

- Stay in topic.
- Defer judgment.
- Go for volume.
- Encourage wild ideas.
- Listen to others.
- If possible, be visual.

2

Brainstorm

Write down any ideas that come to mind that address your problem statement.

10 minutes

SMART RAILWAY SOLUTION

ARAVIND RAJ

- Machine Learning Algorithm to predict the arrival time of train.
- Augmented reality enabled solution to guide the passenger to respective seats.
- API fetches information from the calendar app for automatic pre-booking of ticket.
- Automatic wireless payment system using NFC for easy payment.

YUVASREE

- IOU-Max matching tracking algorithm based on YOLOv3 Network used to track passenger flow.
- Automatic train operation via ETCs
- Scalable sensor platforms for managing requirements of rail sector.
- FBG strain sensors to monitor critical rail components.

MAHESWARI

- Digital twin model system to monitor activities in real time and respond to changes in advance.
- Big data analytics to handle customer information.
- 3D laser scanner to accurately measure tracks.
- GPS receiver is used for location identification,

MANOJ SINGH

- Increased personal surveillance using interior and exterior locomotive mounted video surveillance.
- Direct interfacing method for interlocking mechanism
- RSA encryption and decryption algorithm for ticket checking.
- B-scan ultrasonic for rail flaw detection.

RAHUL KARAN

- IR Sensor used for obstacle detection.
- Social data repository for predictive analytics.
- Track-laying machines for speed construction.
- Using training simulator & VR training system for improved personnel capabilities.

NAVEEN KUMAR

- Advanced Interlocking system to avoid conflicting movements on the tracks.
- Interactive windows to improve services for passengers.
- Discover infineon's XENSIV sensor for predictive maintenance .
- TWS are used for planning rail routes.

4

Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

20 minutes