## HARISANJAI A

5G technologies could be great option for high speed railways

Use of training simulators and virtual reality (VR) training systems to improve personnel capabilities.

In e-Ticketing, allow apps to use default VPN technologies to enhance security and avoid data breaches

e-ticketing with services such as infotainment and app-based systems.

## **INDHUMATHIS**

The internet of
Trains greatly
impacts the
reliability and
safety of railway
infrastructure

Startups and scaleups are working on developing new autonomous train systems thet will increase the efficiency and reliability of railway transportation.

With fast and reliable LTE connectivity, the rail communications system keeps feeding passengers real-time information, timetable updates, important announcements, as well as advertising and entertainment, delivering a nice passenger experience.

The startup uses wireless
IoT sensors for automated
safety monitoring and
prediction of wheel and
bearing failure as well as
detection of oil or gas
leakages

## **HEMAPRIYA K S**

Train-to-train
communication through
the cloud enables
operators to transmit
data about equipment,
tracks and stations
among themselves.

have been developed that can display train velocity for drivers and report speeds back to central control systems

Speed monitoring and

control is another important

safety application. Systems

This one might not seem suited to a seemingly revolutionary fourth-generation technology, however, IoT can massively improve the cleanliness of bathrooms. 'Smart-cleaning' ensures that cleaners are only called when they are needed, so their time isn't wasted when they could be cleaning other stations or other parts of the same station

Communicationsbased train control (CBTC) enables efficient rail traffic management asset monitoring

## HEMALATHA M

Smart sensors can be
used to track
important assets,
manage passenger
flow, and enable
predictive
maintenance

Smart coaches having special diagnostic systems and sensors connected to integrated computer systems for increase passenger comfort

Be alert and reduce your speed while approaching railway unmanned level crossing.

The advancements include moving towards improved mobility on the high-density network and highly utilized network.