# PROJECT BASED LEARNING

# PRESENTATION

## Bike Pooling for College Students

# Team Members

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# Problem Statement
# (Our Aim)

**To devise a favourable means of travel for college students so as to overcome the various issues faced by them.**

# Project Overview

Entering a college is a monumental phase in all our lives. College life could be stressful, daunting and expensive at the same time. In recent times, the number of students moving to cities for college has rapidly increased. Travel becomes one of the key challenges for students staying far. We live in a connected world today and bikepool services solves a lot of these problems by connecting people who are going somewhere with people who need to get somewhere.

# Methodology

1. Problems faced

2.Solution

3.Practical Implementation

# Problems Faced:

## Pollution

In todays era, there has been a significant rise in the air pollution in the city due to various factors, one of them being exhaust from bikes.

## Student Transportation issue

Students are not able to reach at college/home on time because of lack of transportation.

# Transport problems for students

There’s no doubt that higher education is a powerful road to success. But what happens when the road is filled with potholes, impossible distance, broken-down vehicles, a lack of public transportation and other roadblocks. Many students have no problem getting into universities but they do have problems with getting there – literally. That’s why it’s so important to make sure each student has some reliable way of getting to where they need to be.

# Relevance to the Curriculum

## Environmental Friendly

1)Alternative fuel technology
2)Take Public Transport
3)Using of Information Technology like GPS

## Student Friendly

1.To promote the importance of bike-pooling amongst college students.
2)Accomodation near College

Sakal Times


# After cars, bike pooling takes off in crowded Pune

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**Pune:** Long wait in traffic queues is a constant problem across the city and commuters are facing a lot of issues because of it. Increase in fuel prices, air pollution and lack of proper public transport are adding to commuters' woes. These problems led to car pooling few years back and now, bike pooling has also started. In a city like Pune, where travel distance is not usually more than 15 km, people prefer bike pooling. It is becoming a more popular choice among people, as it saves time and is cost-effective. A lot of IT professionals travelling towards Hinjawadi prefer bike pooling to commute to work.

With the increasing demand for bike pooling, platforms like SRide and Gogreenryde are gaining popularity among working professionals, as they connect people travelling on same route at the same time. These platforms help in identifying the ride matches, connect the riders, communicate and share the costs of travelling. These apps are popular among working professionals across India, as it gives them a comfortable, safe and cost effective ride.

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## JUXTAPOSITION

- IT professional Ashish Suman said, "In Pune, traffic is really bad and the condition of public transport is worst, thus pooling is the best option for daily commuters like us."
- However, police say safety of the rider could be jeopardised.

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# After cars, bike pooling takes off in crowded Pune

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"Our app Gogreenryde provides both car-pooling and bike-pooling since 2016 and more than 50 per cent of the users in Pune prefer bikes, as it is more easier to travel and also cost effective," said Raj Dubel, CEO, Greentin Solutions Pvt Ltd. He further said, "The response for bike pooling is enormous in Pune, as there are more bike owners than cars. In Pune's traffic situation, bikes take less time and are convenient to travel."

Co-founder and CEO of SRide Lakshna Jha said, "In comparison to other cities where normal travel distance is 30 to 40 km, in Pune people normally travel 10 to 15 km everyday for work. Thus, because of less distance, bike pooling is more popular than car pooling. There is no doubt that there are more bikes than cars, and it is quicker and more convenient than cars, as it take less time in traffic, so people prefer bikes over cars."

IT professional Ashish Suman, who travels everyday from Wakad to Hinjawadi, finds car pooling/ bike pooling apps as a very convenient platform that facilitate a comfortable travel. He said, "In Pune, traffic is really bad and the condition of public transport is worst, thus pooling is the best option for daily commuters like us." He further added, "I prefer to pool a bike, as it is more cost effective and also saves time especially in the morning when you have to reach your office on time."

COST EFFICIENT: Commuters sharing a bike. Bike pooling has emerged as a new trend in the city.

Ganesh Autade, an IT professional, who travels from Katraj to Hinjawadi, finds pooling cost effective and convenient to travel. He said, "In a city like Pune, where public transport is not really much developed and traffic is a mess, pooling is the best option for commuting, as it is convenient and cheap." He further added, "In traffic of Hinjawadi, if you are travelling by car, there are chances that you might get stuck in traffic jam for hours but with bikes, you can travel more easily as it doesn't consume much space like cars."

Senior Police Inspector Kishore Mhaswade, incharge of Hinjawadi traffic division, said, "I have heard about bike pooling and it will definitely help in reducing traffic on road but safety of the commuters should not be jeopardised, as you do not know the person with whom you are travelling. Women's safety can also be at stake with bike pooling and car pooling."

"It is very important to see that whether these bike pooling platforms follow all the legal procedures of RTO or not. If they adhere by all rules and regulations without compromising the safety of passengers, we have no problems with such things," he added.

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# MARKET SURVEY

**COVID-19 Impact Analysis:**

The outbreak of COVID-19 caused huge impacts on global economy, owing to total lockdown and temporary shutdown of industries across the world.. Public transport tends to contain many people in one shared space, which boosts the spread of the coronavirus disease. As people reassess ground transportation options in the face of the COVID-19 pandemic, many are choosing isolated modes such as driving or biking over public transportation or ride-sharing. People are choosing bike sharing services to cover medium to short distances in view of health safety concerns during the outbreak.

# Intro and Description

## Intro

The bike pooling idea gives us a virtual environment to interact with like-minded people,expand our social network and most importantly minimize our cost of travelling in our day to day life

## Description

BikeP is an android application in which people will share bikes to travel distances which goes along the same route of the bike user. Bike Pooling is a pick-up and drop-off service provided to the users according to their needs. Hence number of vehicles will be reduced so that traffic congestion problems, air pollution will be reduced.

# Benefits of Bike Pooling

1. **Cost Effective.**
2. **Faster than public transportation.**
3. **Solves traffic issues.**
4. **Reduces Pollution.**

# Features

Carpooling / bike-pooling has been a very useful means of transport for many folks over the last few years. Helped by boom in mobile internet, very user friendly apple/android application platforms & loads of readily available api service providers, we have seen an amazing confluence of transportation & technology right at our fingertips. Modern app based carpooling services have had certain benefits that have been unchallenged -

- Verified users with Organizational details giving better sense of security.
- Far lower cost per ride compared to cab aggregators that are the primary alternative.
- Comfortable rides with people from similar work profiles.
- Punctuality & convenience compared to overcrowded & unreliable public bus services.
- Time & location flexibility compared to employer provided bus / cab services.
- Economical transport & monitory savings (even extra income!) for car owners offering rides.
- That angel ring over the head feeling of having helped in reduction of CO2, CO, NOx emissions for the greater good.

# Literature

Pune, the second most important city of the western Indian state Maharashtra, has changed drastically. The number of workplaces fast-paced growth has ensured the population explosion in this city. This population of Pune altogether create traffic congestion which can be called as the traffic trouble of Pune.

The ongoing Pune Metro railway work has given the entire traffic scenario a new dimension! Due to the construction work, the roads have become narrow and full of ditches and potholes. Pune already lacks a strong public transportation system wing, so people need to travel by their own vehicles. App cabs are also plying on the roads but not everyone can afford that on a daily basis. Most of the time traffic moves like a snail. This problem takes the worst turn at peak hours when everyone has to get stuck in traffic.

Bike-sharing in Pune is super effective to curb down the daily travel time. Less traffic time means commuters can expect to spend some quality time with their family members. The conception of bike pooling is a big relief among the office goers. Two-wheeler has the advantage of taking as many zig-zag shortcut routes as it can is really effective to beat the traffic. Bike pooling is not only cost-saving or time saver- it helps to keep the environment green. Bike pooling effectively helps to emit less Co2 which is the perfect way of paying tribute to the mother nature.

# Implementation and Details

Our project will be deployed only on college basis . so as to ensure security of users .

This project will be deployed on 3 stages .

Stage 1 : Survey Analysis

Stage 2 : Deployement of Beta vesion

Stage 3 : Deployement of Final stable version

# What's Next for us?

### *Stage 1 : Survey analysis*

Firstly we will sort out some users who are intrested in our project using a small survey on college basis.

### *Stage 2 : Deployment of beta version*

After that we willl deploy a beta vesion to those selected user so as to get review and bug analysis about our software.

### *Deployement of stable version*

After fixing the bugs and ensuring stablity and proper functioning our app. we will mass deploy it for a college.

# SYSTEM REQUIREMENTS:

- **Processors:** Intel Atom® processor or Intel® Core™ i3 processor
- **Disk space:** 1 GB
- **RAM** 512 MB
- **Operating systems:** Windows* 7 or later, macOS, and Linux
- **Java version:** 8

# SALIENT FEATURES:

Interactive Java Application that prompts for choices by displaying a portal that allows new users to register and others to login, create rides,view ride maps and carbon footprint emissions. The app prompts the user to confirm created ride choices from the desired location, thus allowing the user to re-enter if he/she doesn't want to confirm previous selection or change this choice for reconsideration.

# PRACTICAL IMPLEMENTATION

Welcome to Ride Share Application.Your one stop shop for all your smart travel needs

Login

Register

Route Maps

Reports

About

Exit Application

# Results & Analysis

Consider the following situation: a bikeshare customer routinely travels from home to a destination such as their workplace, and back home. That is, each customer goes from home to their origin station using a shared bikes, returns the bike to the pool located there, takes public transport to their destination station, rents another bikes from a pool at this location, and ride from the destination station to their final destination, e.g., workplace. The customer keeps ownership of the bikes during the working day, then uses the same bike to return to the destination station, drops it off there, takes public transport to their home station, and picks up a different bike there to travel home, retaining ownership of the bike overnight.

A naive solution is to allocate two bikes per customer: one at their origin station, which will be taken home at the end of the workday (or returned to a bikeshare stand at the customer’s home if one exists), and one at their destination station, which will be parked at the workplace throughout the workday (or returned to a bikeshare stand at the customer’s workplace if one exists). While this solution is easy to implement, it is expensive. We present two probabilistic techniques that guarantee bikes availability, with high probability, but using a smaller bicycle pool: i) a transient-state analysis based on the difference of random variables and ii) a steady-state analysis based on the Engset model