**MINI PROJECT – II**

**(2018-19)**

**Group Travel Plan**

**Using Genetic Algorithm**

​

**<**​ **Group No>**

# SYNOPSIS



**Institute of Engineering & Technology**

**Team Member**

**Yash Punetha** (161500639)

## Supervised By

**Name: Pankaj Sharma**

**Designation: Asst. Professor**

**Department of Computer Engineering & Applications**

**Motivation and overview:**

## The project ​‘Group Travel Plan using Genetic Algorithms’: Anyone who has planned a trip for a group of people, or even for an individual, realizes that there are a lot of different inputs requires, such as what's everyone flight or train schedule should be, how many cars, or automobiles to be rented, which station or airport is nearest. Many outputs must be considered, such as total cost, time spent waiting at airports, and time taken off work. As the inputs can't be mapped with a simple formula, the problem of finding the best solution lends itself to optimization.

Optimization finds the best solution to a problem by trying many different solutions  
and scoring them to determine their quality. Optimization is typically used in cases  
where there are too many possible solutions to try them all. The simplest but least  
effective method of searching for solutions is just trying a few thousand random  
guesses and seeing which one is best.

**Future Prospects:**

There are many ways this problem can be expanded. You might combine it with a weather search to optimize for combinations of prices and warm temperatures at potential destinations, or with a hotel search to find destinations with a reasonable combination of flight and hotel prices.

**Requirements:**

Following hardware & software resources are required for overall development of project:

1. **Hardware:** 
   1. **CPU**: ​5th Gen Intel Core i3 8800k with 12 Logical processors.
   2. **GPU:** AMD Radeon R5 M430 with 4GB
   3. **RAM**: 4GB DDR4
   4. **Storage**: 10GB SSD
2. **Software:** 
   1. **Programming language:** ​Python 3.6.4 2.
   2. **IDE:** ​Anaconda Spyder
   3. **Frameworks**: Panda, Numpy