**Project to be completed by internship candidates:**

1. **Data:**

The attached CSV file provides geospatial logs coming from different equipments at a regular interval. Below is the brief description of each attribute:

A. *track\_record\_id*: Unique number given to each log

B. *status\_code*: Log correctness code (61445 indicates good log, all other status code indicate bad)

C. *latitude\_gps*: latitude of the equipment at the given time

D. *longitude\_gps*: longitude of the equipment at the given time

E. *device\_id\_x*: Equipment identifier (used by team x)

F. *device\_time\_stamp*: time (datetime) when log is created

G. *asset\_type:* 4xxx = movable equipment type 1; 6xxx = stationary equipment type 1; 8xxx = movable equipment type 2; 7xxx = stationary equipment type 2

H. *packet\_generating\_station\_id*: Equipment identifier (to be used by internship candidate)

I. *track\_num1*: Indicates whether equipment ignition is ON (1) or OFF (0)

J. *asset\_id\_project*: Equipment identifier (used by team y)

K. *project\_id*: project number where the equipment is working at the given time

L. *supportsite\_id*: segment of project to which the equipment is assigned to

1. **Problem:**

Understand, clean and analyze the data. Using geospatial coordinates, come up with reports providing:

A. Distance traveled: total distance (unit: km) covered by each equipment on daily basis

B. ON time: total time (unit: hour) for which ignition of each equipment was ON (*track\_num1* = 1)

C. Equipments in the vicinity: if a main equipment is at the location of (latitude = 28.09029007, longitude = 77.33970642), provide a map (one map for each day) showing: a. geofence/circle of radius=100m around the main equipment; b. Equipments present inside fence between 9:00am and 9:10am (one map each day)

1. **Report:**

The submission must include following:

A. Flowchart / pseudocode briefly describing your approach.

B. Code files

C. Tabular reports, plots and maps

1. **Extra:**

Additional PPT which can be used to present results is encouraged.