

## VALIDATION OF NEW INTERPOLATED COORDINATES WHICH CREATED CONSIDERING THE UNCERTAINTY

### New Dataframe Columns

index	(row index)
<b>Point</b>	<b>(initial coordnates)</b>
hash_id	(user)
nearest_coord	(from the polygon area)
new_distance	(result of uncertainty + distance from the closed neighbor)
<b>new_point</b>	<b>(after interpolation)</b>
timestamp	(epoch time)
uncertainty	(meters)

### Take 2 points for user 9.0

245  
POINT (14.6085908322872 59.12388880343857)  
**9.0**  
POINT (14.6085908322872 59.12388880343857)  
3.1269626693514514  
POINT (59.12391687380919 14.6085908322872)  
1610725030.0  
3.1269626693514514

246  
POINT (14.6085572780476 59.12386995101352)  
**9.0**  
POINT (14.6085572780476 59.12386995101352)  
2.1859144650366846  
POINT (59.12388957370683 14.6085572780476)  
1610725031.0  
2.1859144650366846

The new interpolated coordinates from their previous coordinates using the uncertainty in meters.

-- We project them on a map and observe if they have logical distance.

-- Their new coordinates are valid in terms of logical measurements.  
both point are in a parallel line.

The right yellow area has the points around 3 meters away from each other,  
the left yellow area has the points with around 2 meters away .

