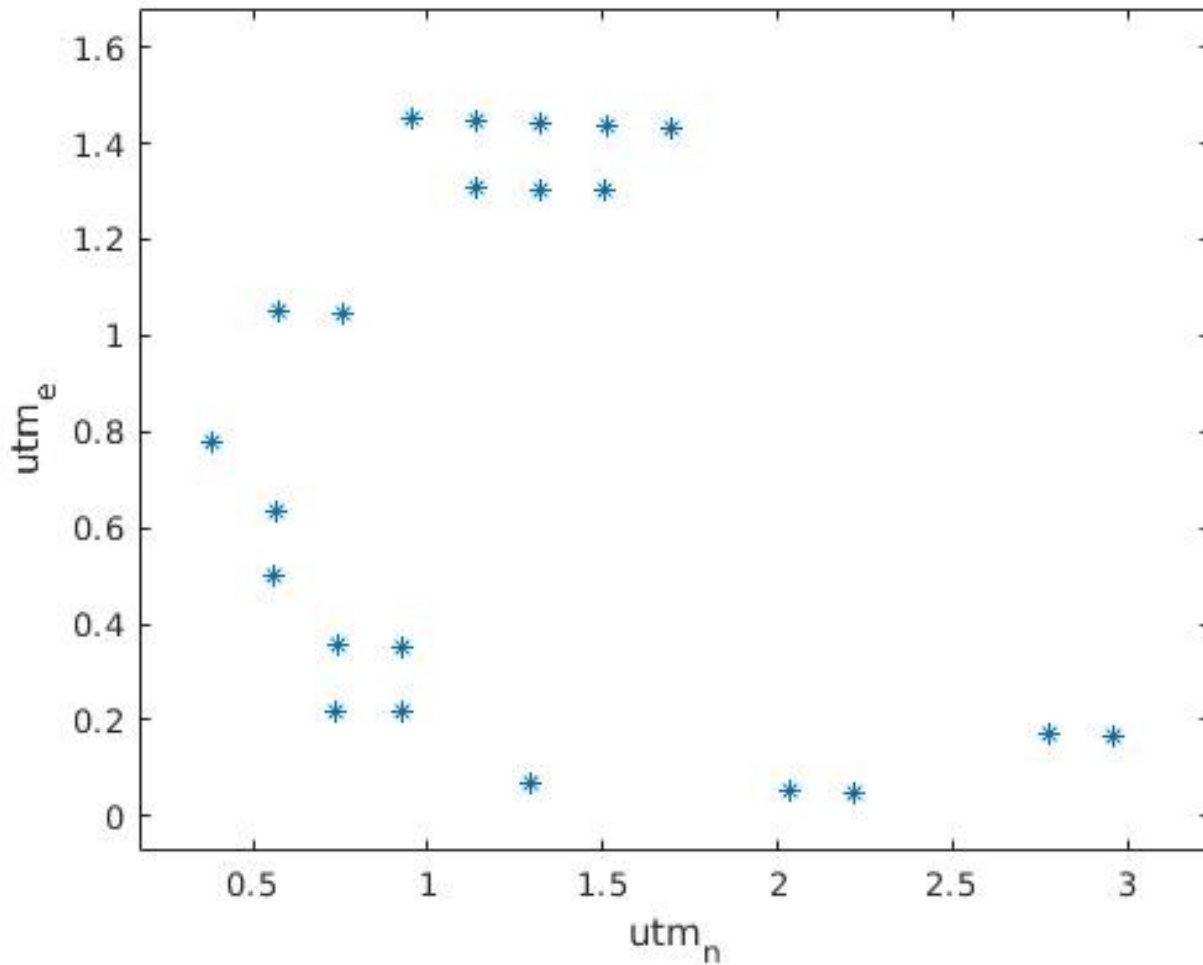


Lab 2 Lcm GPS driver

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One Spot GPS data collection



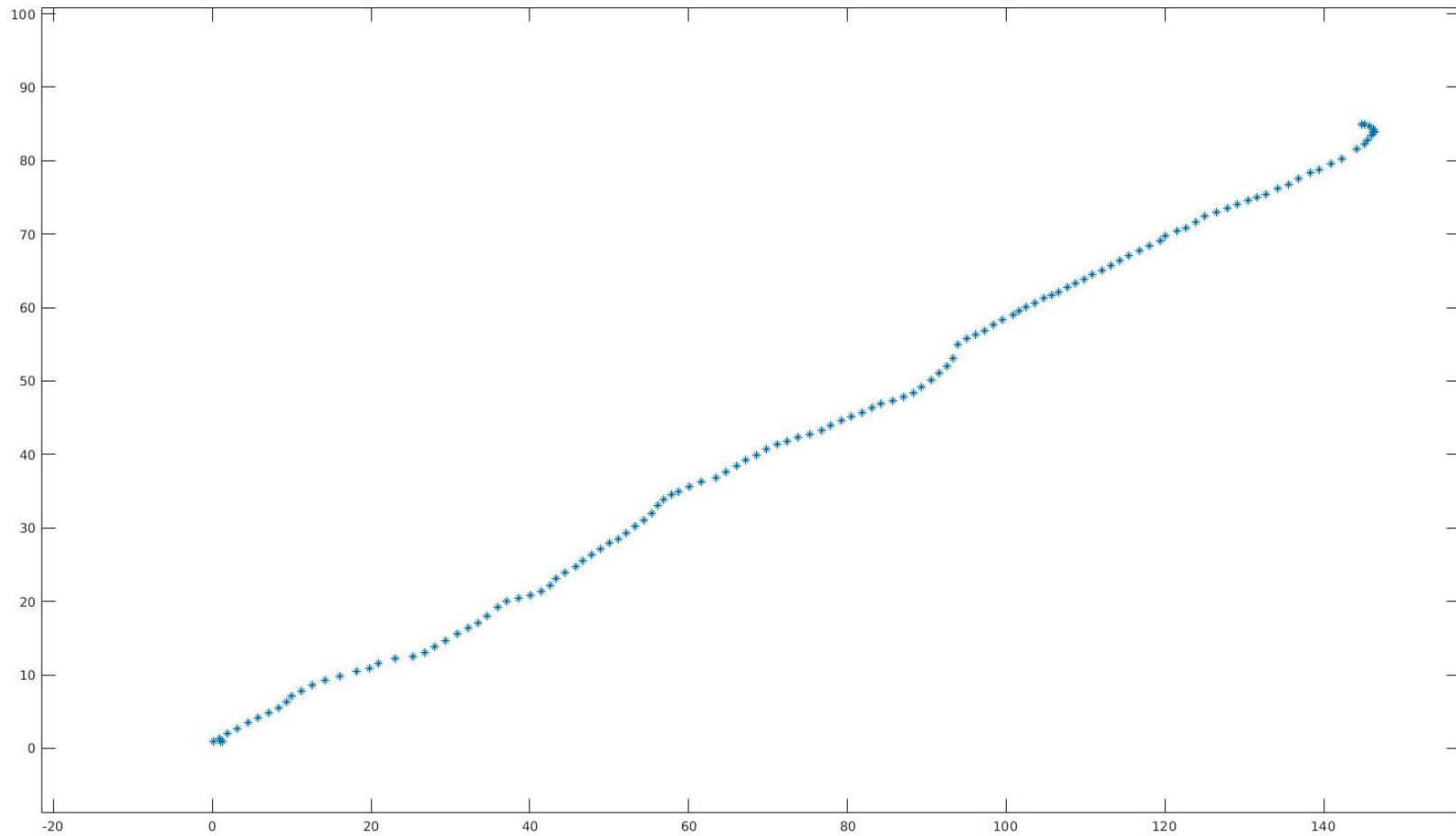
I collected these data near curry center at one spot outside for ten minutes. It collected 631 sets of data.

We found that the location is defined as utm coordinates format. Utm_e means utm east direction, and utm_n means utm north direction. We all know that the UTM(Universal Transverse Mercator) system is a system of coordinates that describes position on a map. So we can use the data collected to locate us in the map. There also exists some error in the data. The error estimation is following.

Error Estimation

- The distribution of east is in the range(0,1.6m)
- The distribution of north is in the range(0,3m)
- The error range is 4.8m^2
- The error sources maybe atmospheric effects, Multipath effects, Ephemeris and clock errors, etc.

Walking in a straight line



Data Analysis

Compared with line walking data, I think the main error of the immobile one is from Multipath effects. Because Multipath effects are much less severe in moving vehicles while we found that the walking line one is highly precise. To verify my conclusion, I need to test it in different spots like playground, terrain, block, etc.