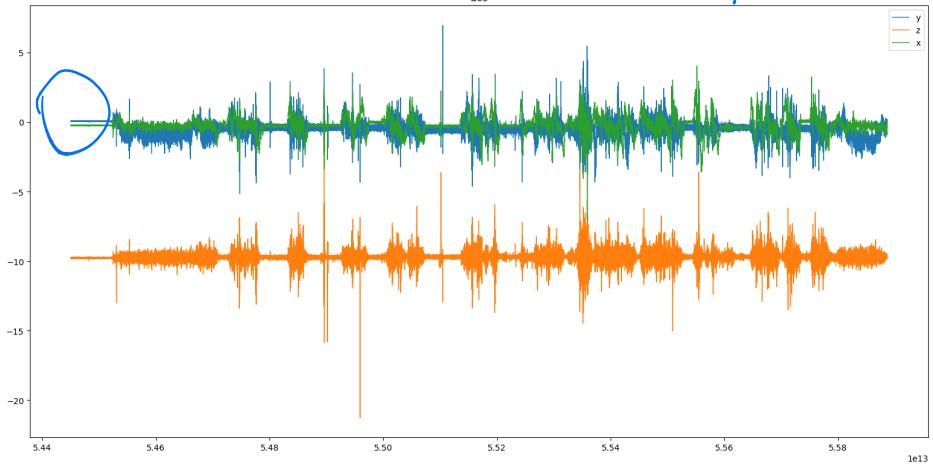
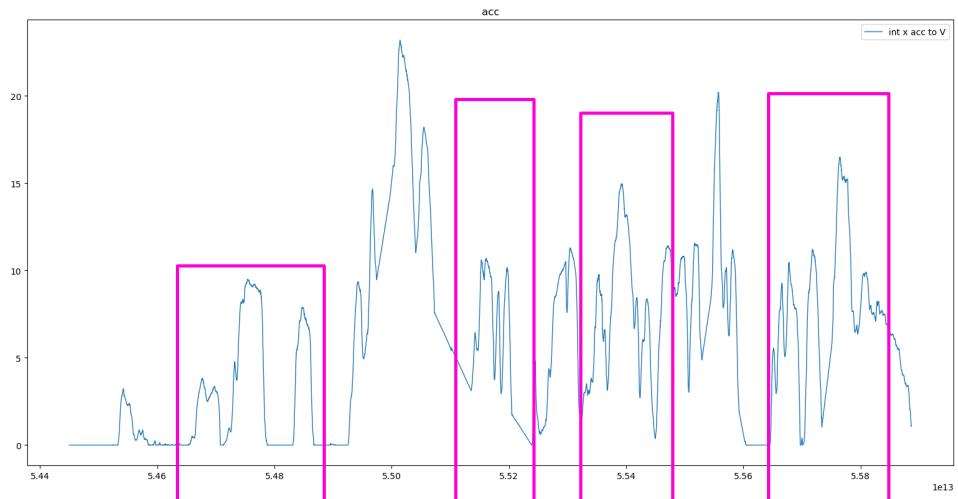


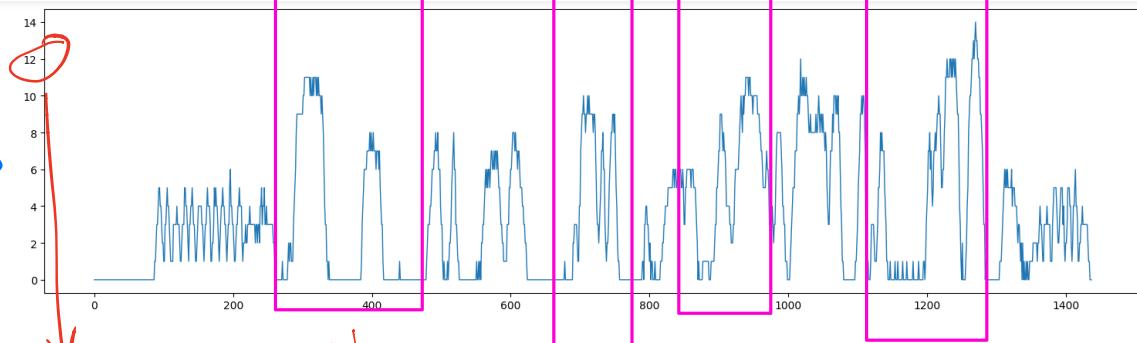
acc-x has bias, I remove for next steps



✓ integrated  
from acc-X

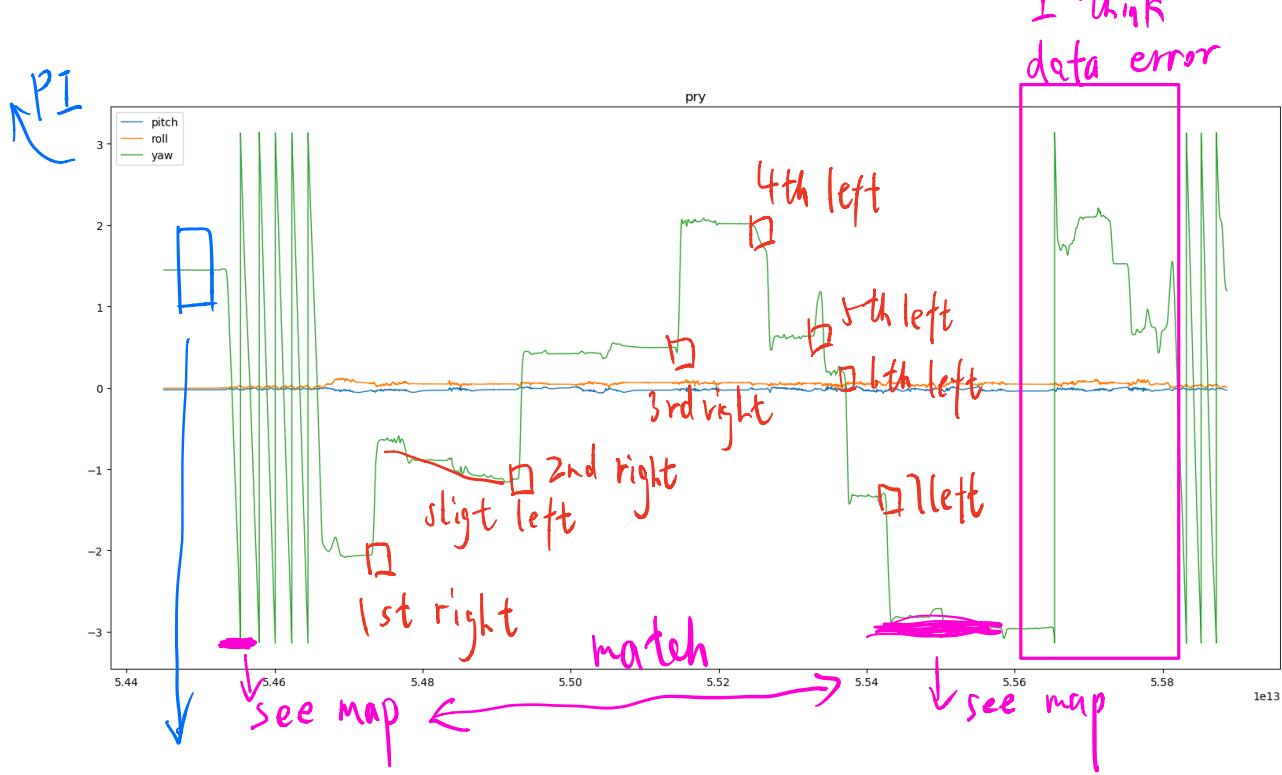


✓ get  
from GPS



$$12 \text{ m/s} \approx 43 \text{ km/h}$$

looks similar

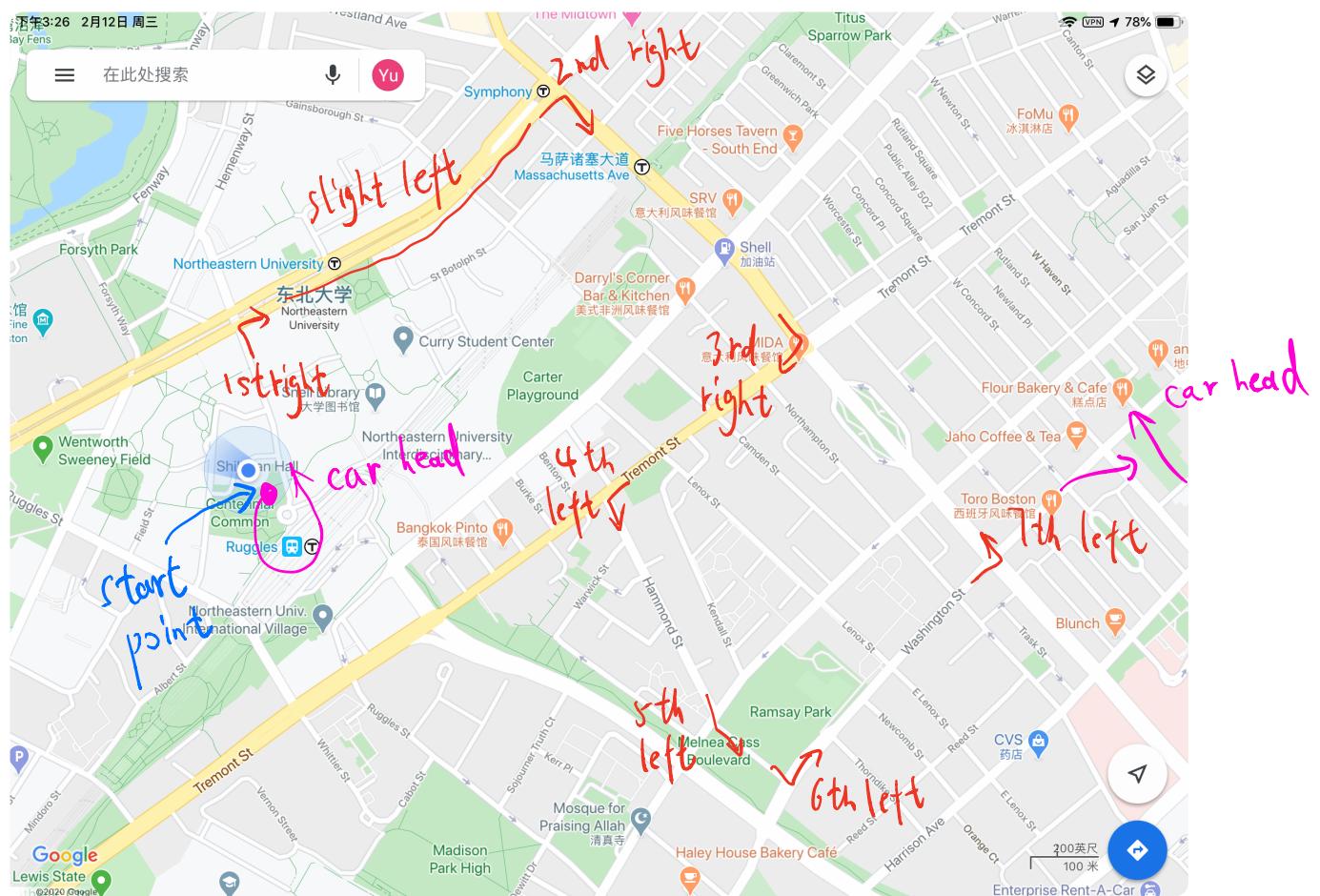


from 1st pic, we turn left, and yaw ↓

so, turning left → yaw ↓

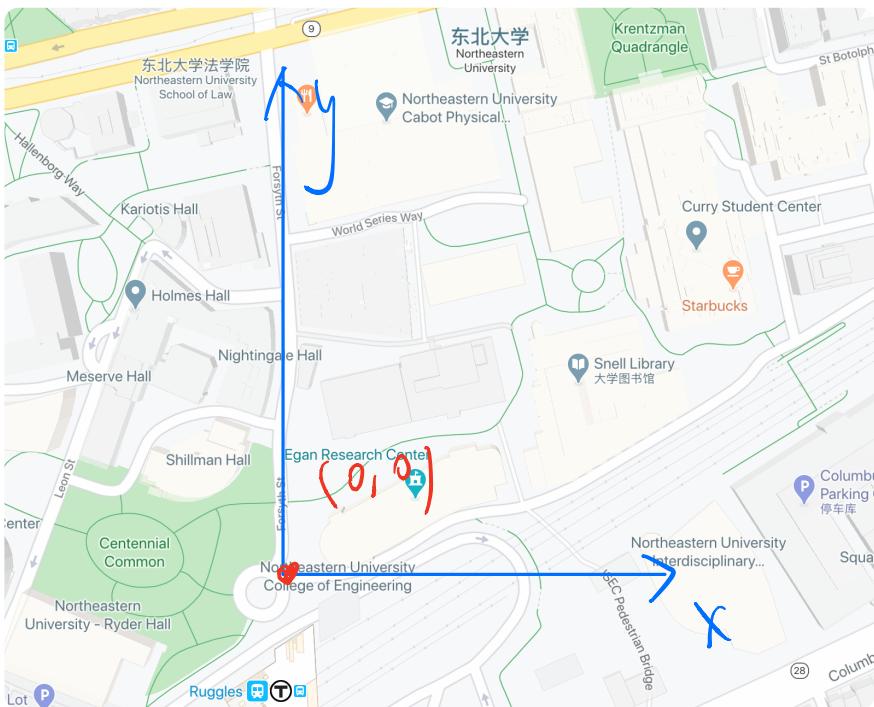
turning right → yaw ↑

I think  
data error



I got dis-int from Acc-x (previous steps) by integrate with 40Hz (sampling period)

If I set (0,0) on the map (see map below) and create a X-Y coordinate



in each sampling period (40Hz)

If I start at (0,0), and calculate yaw-change

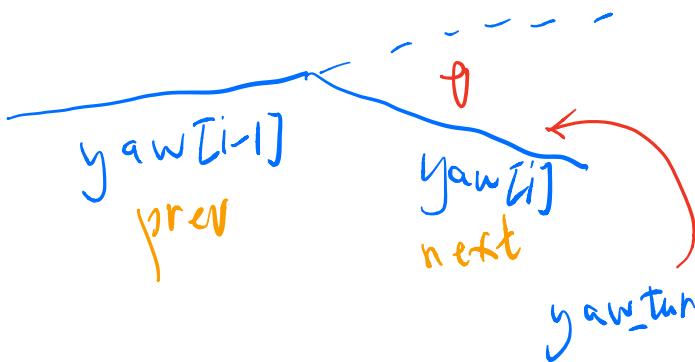


$$\text{yaw\_turn} = (\text{yaw}[i] - \text{yaw}[i-1]) / (\text{pix} * 180)$$

So if the abs(yaw-turn) < 90°  
 next coordinate = prev + change  
 $x[i] = x[i-1] + \sin \theta \cdot \text{dis\_int}[i]$   
 $y[i] = y[i-1] + \cos \theta \cdot \text{dis\_int}[i]$

If  $q_0 < \text{abs}(\text{yaw\_turn}) < 180^\circ$

Let's turn right:

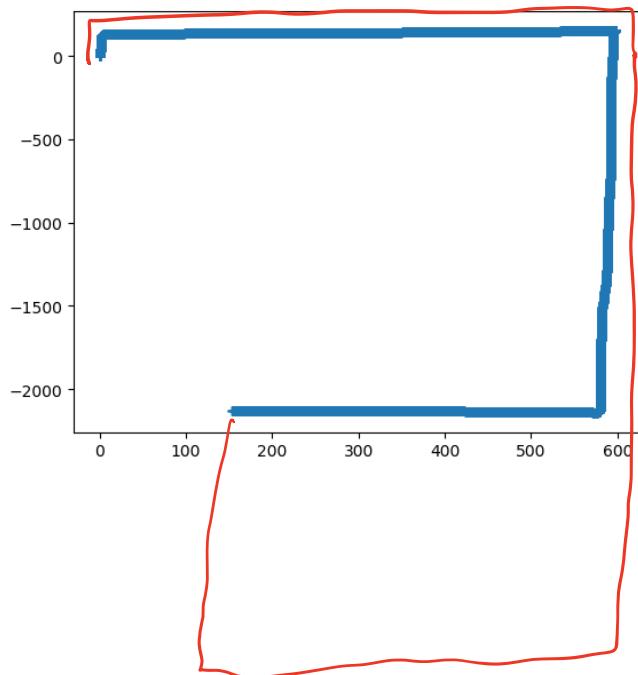


$$\text{yaw\_turn} = (\text{yaw}[i] - \text{yaw}[i-1]) / \text{pi} * 180$$

So : next coordinate = prev + change  
changes to:

$$x[i] = x[i-1] + \cos \theta \cdot \text{dis\_int}[i]$$
$$y[i] = y[i-1] - \sin \theta \cdot \text{dis\_int}[i]$$

With the principle above, I get part of the path



the real distance  
is not true

I don't draw this  
part, seems data  
is something wrong.