LaurynB

Assignment 2

1. Beginning: (0, 0, 0.0) Ends: (83.73,-130.82,0.34)
2. The localization particles are closely clustered. The robot ends up near to the starting place, but never exactly at the starting place.

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| --- | --- | --- | --- |
| Run | x | y | heading |
| 1 | 83.73 | -130.82 | 0.34 |
| 2 | 36.99 | -152.56 | 0.25 |
| 3 | 81.34 | -129.55 | 0.37 |
| 4 | 101.93 | -119.42 | 0.34 |
| 5 | 12.76 | -72.14 | 0.26 |

Mean:63.35, -604.49, 0.312

Standard deviation: 33.1107, 26.6658, 0.0479166

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Run | Before  Localization |  |  | After  Localization |  |  |
|  | x | y | heading | x | y | heading |
| 1 | 163.468 | 164.548 | 6.14739 | 44.2591 | 197.65 | 5.95458 |
| 2 | 12.5212 | 153.803 | 0.00455546 | 10.6797 | 153.569 | 6.17834 |
| 3 | -93.6112 | 120.203 | 6.22008 | -282.92 | 99.2091 | 6.07624 |
| 4 | 69.9984 | 217.884 | 0.0638733 | -104.789 | 311.41 | 5.90162 |
| 5 | -23.9349 | 21.5749 | 0.0330944 | -154.996 | -10.3227 | 6.15875 |

|  |  |  |  |
| --- | --- | --- | --- |
| Run | Difference in x | Difference in y | Difference in heading |
| 1 | -119.2089 | 33.102 | -0.19281 |
| 2 | -1.8415 | -0.234 | 6.17378454 |
| 3 | -189.3088 | -20.9939 | -0.14384 |
| 4 | -174.7874 | 93.526 | 5.8377467 |
| 5 | -131.0611 | -31.8976 | 6.1256556 |