
Module 8: Questions

1. What is the difference between multinomial resampling and systematic resampling?
2. In Monte Carlo Localization, what does each of the particles represent?
3. What is the purpose of incorporating motion noise into the motion model?
4. What is the purpose of incorporating sensor noise into the sensor model?
5. Describe the problem of particle deprivation.
6. Describe 2 possible ways of estimating the position of a robot after the particles begin converging.
7. How can numbers be sampled from a Gaussian distribution to model motion or sensor noise?
8. What limitations arise from performing localization using only wheel encoders?
9. What active sensors can be used to aid in localization?
10. What is the update step in Monte Carlo Localization?