

Software Engineering Project

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Sequential Monte Carlo (SMC, also called particle filter), is a widely-used statistical sampling method for simulating random samples from complex dynamical systems. In this project, we are going to use visualization techniques to illustrate how the algorithm works and some key features of the algorithm. In particular we will:

- Illustrate (by visualization) how will the number of particles and different choices of proposal distributions affect the algorithm's performance;
- Illustrate different versions of the particle smoothers, which can be regarded as extensions of the basic particle filter, with nice visualizations.