

# CSE 490R Reflection

---

Nansong Yi

## Course Content:

- The content covered by this course ranges from probabilistic robotics including bayes filter, SLAM to controllers including pid, pure pursuit, Lyapunov, and MPC then to planning including heuristic/lazy search, anytime search via incremental densification, which are great for students to understanding the whole picture of mobile robot. However, if this course can cover more thing about application of object detection in robotics since our racecar is a mini autonomous driving car in some way, that would be better.

## Homework and Labs:

- All the homework are lab project, I think it would be better if there's some theoretical derivation homework such as derivating Extend Kalman filter, Particle Filter, LQR, iLQR.
- We covered mapping and SLAM, I think it would be greater if we have one lab about SLAM.
- As mentioned above, adding some object detection algorithms into labs would be of fun.
- The lab specification need to be more concrete, some of questions in lab2(controller) are confused.

## Other Suggestions:

- Record the lecture, some students would like review lecture via recording videos.
- Provide a simple tutorial about `mushr_sim`, so student can explore things by themselves after this course and maybe people in the same team can work on their own pc, then they may come out more different ideas.