Summary of this week

- This week was full of content!
- You first learned how to detect (and discard) bad sensor measurements automatically with a KF.
- You learned how to improve computational efficiency by processing measurements sequentially for multi-output systems.
- You learned how to augment the KF with additional equations to perform prediction and smoothing.
- You learned how to develop and implement steady-state Kalman filters for improved computational efficiency.
- And, you learned how to derive continuous-time Kalman filters (and gained some insights from them).

Where to from here?

- Next week, we will focus on an important application of Kalman filters: target tracking.
- You will learn about some unique features of the target-tracking application.
- You will learn how to convert polar measurements to an equivalent Cartesian state (not as simple as it sounds!)
- You will learn about the interacting multiple-model Kalman filter, and will see how to implement it in Octave.
- You will learn how to compute the steady-state solution algebraically for some important target-tracking models.

Credits

Credits for photos in this lesson

- Building a stairway picture on slide 2: Pixabay license (`https://pixabay.com/en/service/license/`), `https://pixabay.com/en/white-male-3d-man-isolated-3d-1871366/`