Summary of this week

- This week, you learned:
  - How to generalize linear state-state model to describe nonlinear systems
  - How to apply two assumptions to derive the extended Kalman filter from the generic Gaussian sequential-probabilistic-inference solution
  - How to write Octave/MATLAB code to implement EKF for a simple example and for the battery-cell state-estimation problem
  - See some examples of applying EKF to estimate cell SOC using lab-test data

Where from here?

- Next week, you will learn
  - Sigma-point approach to approximating statistics of a RV passed through a nonlinear function
  - How to apply sigma-point approach to general Gaussian sequential-probabilistic-inference solution to derive the sigma-point Kalman filter
  - How to write Octave code to implement SPKF for a simple example and for battery-cell state-estimation problem
  - See some examples of applying SPKF to estimate cell SOC using lab-test data

Credits

Credits for photos in this lesson

- "Map" on slide 2: Pixabay license (`https://pixabay.com/en/service/license/`), cropped from `https://pixabay.com/en/compass-navigation-map-direction-390054/`