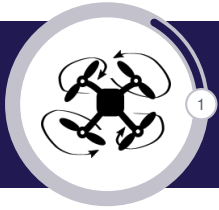
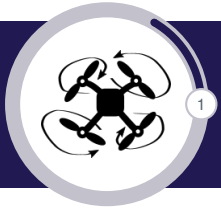
Introduction



In this seminar, we will review

Introduction



In this seminar, we will review

- a mathematical model and a Python simulation of a quadrotor/drone dynamical system

Introduction

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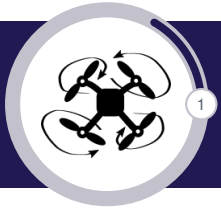
- a mathematical model and a Python simulation of a quadrotor/drone dynamical system
- a flight stabilization controller

Introduction



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- a mathematical model and a Python simulation of a quadrotor/drone dynamical system
- a flight stabilization controller
- a Kalman filter to perform state estimation/perception

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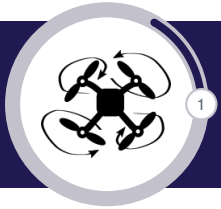

In this seminar, we will review

- a mathematical model and a Python simulation of a quadrotor/drone dynamical system
- a flight stabilization controller
- a Kalman filter to perform state estimation/perception
- a position controller

Introduction

I will assume you know a bit of

Introduction

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- Python programming

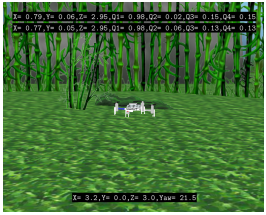
Introduction

I will assume you know a bit of

- Python programming
- some physics and math (e.g. Newton physics, linear algebra, differential equations, probability)

Introduction

(a) Crazyflie by www.bitcraze.io



(b) Our "digital twin"

Let’s begin!