NVIDIA/Cal Poly Robotics Teaching Kit with Jet

Module 1: Course Introduction

Lecture Slides

- 1.1 Course Introduction
- 1.2 Introduction to Robotics
- 1.3 Introduction to Jetson TK1/TX1
- 1.4 Jet Overview
- 1.5 Introduction to ROS

Labs

- Lab 1: Building the Robot
- Lab 2: Using ROS and Jet

Questions

- Student Version
- Answers

Module 2: Sensors and Actuators

Lecture Slides

- 2.1 Sonar, Accelerometer, and Gyroscope
- 2.2 Camera, Motors, and Encoders

Labs

• Lab 3: Sense and Avoid

Questions

- Student Version
- Answers

Module 3: Computer Vision

Lecture Slides

- 3.1 Introduction to Computer Vision
- 3.2 Image Filtering
- 3.3 Image Moments

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Lab 4: OpenCV Intro

Questions

•	Student	Version
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• Answers

Module 5: Dead Reckoning

Module 6: Path Planning

Module 7: Robot Localization

Module 8: Control

Module 9: Obstacle Avoidance

Module 10: Final Project

- Harvester
- Capture-the-Flag

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