

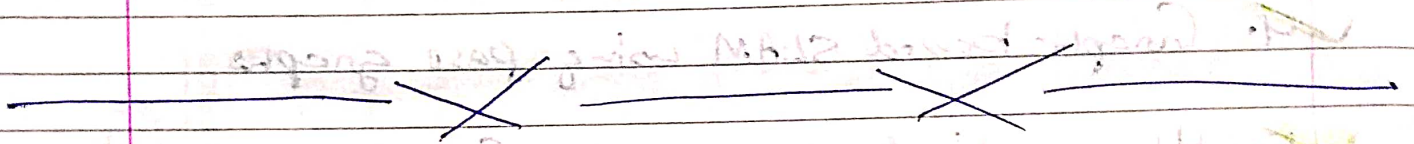
Content

- ✓ 1. Introduction to SLAM
- ✓ 2. Point Cloud Alignment using ICP
- ✓ 3. Least Squares - An Informed Introduction
- ✓ 4. Graph-based SLAM using pose graphs
- ✓ 5. Hierarchical pose graphs for slam
- ✓ 6. Graph-Based SLAM with Landmarks
- ✓ 7. Robust Least Square for Graph-Based SLAM
- ✓ 8. Visual Feature Part 1: Computing Keypoints
- ✓ 9. Visual Feature Part 2: Feature Descriptors
- ✓ 10. RANSAC - Random Sample Consensus
- ✓ 11. Camera Parameters - Extrinsic & Intrinsic
- ✓ 12. Direct Linear Transform for Camera Calibration and Localization.
- ✓ 13. Camera Calibration using Zhang's Method
- ✓ 14. Projective 3-Point Algorithm using Grommet's Method

✓ 15. Relative Orientation, Fundamental & Essential matrix.

✓ 16. Epipolar Geometry Basics

✓ 17. Direct Solution for Estimating the Fundamental and Essential Matrix.



Course Introduction

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⇒ Focus of the course:

→ State Estimation

{ Focus on Geometric Estimation
not on Semantic Estimation }

→ Questions answered:

→ What does the world look like

→ Where is the robot:

