

# A Survey of 3D Algorithm

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Special Thanks must go to ChatGPT! Many of the contents within this book is finished by ChatGPT with my prompts.

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# A Narrow Introduction to 3D world

0.1 Introduction

0.2 2D Camera Coordinates

0.3 3D World Coordinates

0.4 Camera Distortions and Calibration

# Different Methods of 3D Reconstruction

## 0.5 Introduction

## 0.6 Structured Light

### 0.6.1 Passive Dual Camera

### 0.6.2 Coded Light

## 0.7 Time of Flight

### 0.7.1 iToF

### 0.7.2 pToF

### 0.7.3 dToF

# A introduction to 3D Data Usages

0.8 Object Detection and Segmentation

0.9 Localization and Mapping

0.10 3D Textures

0.11 AR VR

# Basic Knowledges Needed

0.12 Matrix Calculations

0.13 Optimizations

0.14 C++ programming

0.15 Linux and ROS