Visual Odometry 2020/06/04

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An overview of visual odometry

vision taxonomy

stereo

monocular

binocular

trinocular

cameras taxonomy

perspective camera

omnidirectional camera

catadioptric camera

Feature descriptor

Haris

SIFT

main cf. read the paper.

A brief illustration

A comprehensive elaboration

SURF

BRIEF

ORB

FAST

BRISK

Miscellaneous notes

[Egomotion](#)

[holonomic and nonholonomic constraints](#)

[reprojection error](#)

[Blur(smooth) image in OpenCV](#)

Affine transformation

[A video example](#)

Affine transformations on the 2D plane can be performed by linear transformations in three dimensions. Translation is done by shearing along over the z axis, and rotation is performed around the z axis.

image saturation(饱和度)

Kalman-filter vs. bundle adjustment in SLAM

> A recursive Kalman filter is more or less the same as bundle adjustment.

[An opinion from web](#)

inverted index(倒排索引)

aka. inverted-file data structure

[Discussion about inverted index](#)

dead reckoning