A NOVEL FILTERING APPROACH FOR ROBUST AND FAST KEYPOINT MATCHING IN MOBILE ENVIRONMENT

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ABSTRACT

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***Index Terms*—** One, two, three, four, five

1. INTRODUCTION

Image matching is a fundamental problem in a variety of computer vision applications, including simultaneous localization and mapping[1, 2], object recognition[3], panorama stitching[4, 5], augmented reality[6, 7], and visual odometry[8, 9].

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2. PROPOSED METHOD

2.1. Problem

In general, keypoint matching methods 일반적으로 키포인트 기반의 매칭 방법은 미리 학습된 키포인트 데이터베이스 K^R와 입력된 영상을 분석하여 생성된 키포인트 집합 K^I를 비교하여, 가장 유사한 키포인트 pair 집합 $C = \{(k_i^R, k_j^I) | \underset{k_i \in K^R}{\operatorname{argmin}} \underset{k_j \in K^I}{\operatorname{argmin}} |k_i^R - k_j^I|\}$ 을 계산하는 과정이다. 기존의 키포인트 매칭 방법은 검출된 키포인트 집합 K^R을 그대로 사용하였으나, 본 논문에서는 키포인트 평가 함수($s(k)$)를 제안하여 이러한 평가 함수에 의하여 필터링된 집합 $K' = \{k | s(k) is \ \ high\} \in K^R$ 을 계산하고, 이러한 필터링 된 부분집합 K'는 필터링 되지 않은 K^R에 비하여 더 높은 인식성능을 보여줌을 증명하고자 한다. 조금만 더 늘여쓰자

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The paper title (on the first page) should begin 1.38 inches (35 mm) from the top edge of the page, centered, completely capitalized, and in Times 14-point, boldface type. The authors' name(s) and affiliation(s) appear below the title in capital and lower case letters. Papers with multiple authors and affiliations may require two or more lines for this information. Please note that papers should not be submitted blind; include the authors' names on the PDF.

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13. REFERENCES

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