CS 231M Project 0

Released on April 7, 2014.

Due by April 14, 2014, 3:15 PM.

Instructions

What to submit:

1. A project report that consists of screenshots of the app running on an Android device (tip: you can grab a screenshot by holding down the power and volume down buttons). Each section below will specify exactly what you need to include for it in the project report.

2. The complete source code for the project.

How to submit:

1. Archive the project report (PDF) along with the source code into a single zip archive.

2. Email it to cs231m+hw0@gmail.com

3. Make sure you include your SUNet ID in the body of the email as well as the project report.

External Libraries

You can use OpenCV for implementing any of the tasks below.

1   Android Basics

Create an Android app that shows a live preview from the device's camera. Include a screenshot.

2   Native Development

Add a C++ module to the project that:

1. Accepts an image as the input.

2. Detects ORB keypoints in the image.

3. Logs the time taken to detect the keypoints.

4. Plots the keypoints on top of the input image.

Update your code for the previous step to send each camera frame to this module and display the annotated image. Include a screenshot, and 5 lines from the log.

3   UI Interaction

Add two buttons (or an options menu) that allows the user to enable/disable the ORB keypoint plotting added in previous step. Include a screenshot of the updated UI.