

Estimation of Object Dimension using Image Processing

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Engineers and Scientists constantly build physical scientific models & need to ascertain its dimensions. It is cumbersome to carry around measuring instruments. This problem was the motivating factor for this project. Applying the knowledge of Image Processing can solve this problem if one can obtain the pictures of the objects customarily using cellphone camera. So, we intend to build a system that takes the images of objects as input and gives their dimensions as output.

This project when implemented with a higher accuracy has a huge scope in the science and academia. Engineers and Scientists can use it to measure their physical models, colleges & universities can use it to grade students on the basis of their models etc. Python programming language is used to implement the project and “OpenCV” is the library is used to pre-process the image. Threshold and Canny methods are used to identify the edges of the object. Then, Reference Object Method & “imutils” library is used to find the dimensions of the object.

The outcome of the project is satisfactory. It has overall a good accuracy in measuring objects and can be used in academia. The system is not yet so sophisticated that it can be used in science as experiments need readings which are very close to the real values. The project was successfully able to cover all the objectives that was devised in the beginning of the project. The team aims to take up the project for future works and make it more accurate.