

A
End Semester
Report
on

Vision Aided Drone Localization in GPS-denied Indoor Corridor Environments

*Submitted in partial fulfillment of
the requirements for the award of the degree of*

Master of Technology
in
Computer Science and Engineering

Submitted by

216CS1134 Shahzad Ahmad

Under the guidance of
Prof. Dr Pankaj Kumar Sa



Department of Computer Science and Engineering

NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA

Rourkela, ODISHA, India – 769008

Spring Semester 2018

Abstract

Vision based navigation of unmanned aerial vehicles (UAV) has been an active field of research in the past decade. There are many challenges in making the vision system understand the environment in which it is placed. Such an environment can be either indoors or outdoors depending on the task a hand. In This project we deals with navigation of UAV in GPS-denied indoor environment. we consider A.R Parrot drone is our UAV model. Our aim is to localization of drone in corridor during flying time with the help of monocular camera which is attach with drone. In this project we designe navigatin algorithm which will tell us the position of drone in corridor by seeing the images which are taken by drone camera. Our navigation algorithm impliment with help of deep learning models use to perform regression task on the images which are taken by drone camera.