**DAILY ASSESSMENT FORMAT**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date:** | **1/July/2020** | **Name:** | **Prashantha naik** |
| **Course:** | **Satellite photogrammetry and its applications** | **USN:** | **4al17ec074** |
| **Topic:** | **Concepts of Satellite Photogrammetry** | **Semester & Section:** | **6th b** |
| **GitHub Repository:** | **prashanth\_course** |  |  |

|  |
| --- |
| **SESSION DETAILS** |
| **Image of session** |
| **Report – Report can be typed or hand written for up to two pages.**  **Digital photogrammetry is a well-established technique for acquiring dense 3D geometric information for real-world objects from stereoscopic image overlap and has been shown to have extensive applications in a variety of fields.**  **Aerial photogrammetry refers to the collection and processing of imagery captured from an aerial or orbital vehicle. Close-Range photogrammetry (CRP) refers to the collection of photography from the ground or some lesser distance than traditional aerial photogrammetry and is becoming increasing popular and accessible due to new, easy to use software and digital cameras. Non-metric, off-the-shelf digital cameras can be used along with relatively inexpensive, or in some cases free, open-source software, to extract and process highly accurate and detailed 3D models of real-world objects.**  **The Center relies heavily on digital photogrammetry (learn how here) as a means of collecting 3D data sets and has a number of high resolution digital SLR cameras for collecting close-range data sets. For a description of these cameras and other photogrammetry equipment at CAST, see the Hardware page. The Center also has a number of software packages used for both aerial and close-range photogrammetry. Information about these programs can be found on the Software page.**  **Orthorectification**    **Above are 2 images of the same geographic area. Note the road that passes through the mountains. In the left "raw" or unrectified image, the road appears to be crooked when in fact it is not. The image on the right has been rectified image and the road appears planimetrically correct.**  **Orthorectification is the process of removing the effects of image perspective (tilt) and relief (terrain) effects for the purpose of creating a planimetrically correct image. The resultant orthorectified image has a constant scale wherein features are represented in their 'true' positions. This allows for the accurate direct measurement of distances, angles, and areas (i.e. mensuration). Orthorectified images are commonly used as in visualization tools such as Google Earth, OSSIM Planet, ArcMap, WMS, etc.**  **The requisite inputs for orthorectification:**  **An image with accurate sensor geometry**  **A elevation model of the ground surface in DEM, DTED, or SRTM format**  **The resulting accuracy of the orthoimage is based on the accuracy of the triangulation, the resolution of the source image, and the accuracy of the elevation model.** |