

Research Project Internship Form

Date: ____ / ____ / ____

Faculty Supervisor Name: Dr. Sudipta K Mishra

Faculty Co-Supervisor Name: *(if any)*

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Department/School: Civil Engineering/ School of Engineering

Internship Project Name: Urban Flooding: Development of flood forecast and Inundation model for NCR Delhi under Climate change

Duration of Internship: 3-4 months

Number of Students Needed: 2-4

Location of Internship (Lab/Company/Office): GDGU lab/office

Prerequisites: GIS, Remote Sensing/ Preferable: knowledge on EPA-SWMM model, and Python Programming

Project Details: *(At least 150 words)*

The increasing trend of urban flooding in India poses a great challenge, resulting in cities being inundated from a few hours to several days. It is important to recognise that urban floods begin with an unanticipated high rainfall event which seriously disrupts public transport, electricity and communications and plays havoc with the urban economy. There has been a rising trend of urban flood disasters in the country over the past several years and in recent past Mumbai (2005), Surat (2006), Guwahati (2010), Srinagar (2014) and Chennai (2015) had witnessed major urban floods. Rapid urbanization and developed catchments, higher run-off, flood peaks and flood Volumes, Faster flow times and quick flooding are some of the reasons for it.

In this project, we will explore and develop flood forecast and Inundation model for NCR Delhi under changing climatic condition using open-source Remote Sensing and GIS data, and Urban flood models.

Comments/Notes:

NA