



## WORK OFFER

Ref. No. IN-2020-31804-MU

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### Employer Information

**Employer:** Manipal Institute of Technology  
Information and Communication Technology  
1st Floor, Academic Block-4, MIT, Manipal  
576104 Manipal  
India

**Website:** <http://www.manipal.edu>

**Location of placement:** Manipal  
**Nearest airport:** Mangalore  
**Working hours per week:** 40.0  
**Working hours per day:** 8.0

**Number of employees:** 500  
**Business or products:**

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### Student Required

**General Discipline:** 11-COMPUTER AND INFORMATION SCIENCES  
**Field of Study:** 11.0103-Information Technology.

**Completed years of study:** 3  
**Student status requirements:** required during entire period of internship  
**Language required:** English Excellent

**Required Knowledge and Experiences:** Cloud Computing, Software Testing and programming skills in Java.  
**Other requirements:**

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### Work Offered

Mutation test is a form of test which determines the correctness of a given program by generating various mutants with the help of the existing operators. Mutation testing works in the following way: Initially, a piece of code that is well covered by unit tests is started. Once verified that all the tests pass for a given piece of code, it is time to apply the mutation test to the target assembly. Now, mutants are generated by modifying the code. If tests are well written, any test that covers the mutated program code should fail (mutant is killed). However, if the tests succeed in spite of the mutated program code then the tests are creating false positives and need to be revisited (mutant not killed). Mutation testing is also applied to test the access privileges of users, roles, and resources by generating the mutation operators based on access control policies. One of the disadvantages of mutation testing is time-consuming and costly since there are many mutant programs that need to be generated. Mutation tests can also be introduced into cloud computing to determine the correctness of the program and can also provide Mutation Testing as a Service. Correctness of the program means to determine the correctness of a cloud-deployed applications or functionality or non-functionality of various cloud models. Additionally, mutation operators can be introduced into the cloud in the area of data isolation, multi-tenancy, access control policies, and virtualization. MuJava and Muclipse are some of the java-based mutation testing tools which will generate and test the mutants.

**Number of weeks offered:** 6 - 10  
**Within the months:** 01-JUN-2020 - 15-NOV-2020  
**Or within:** -  
**Company closed within:** -

**Working environment:** Research and development  
**Gross pay:** 7000 INR / Month  
**Deduction to be expected:** 15%  
**Payment method / time of first / payment:**

**Latest possible start date:**

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### Accommodation

**Canteen at work:** Yes  
**Expected type of accommodation:** Student dormitory  
**Accommodation will be arranged by:** IAESTE India LC Manipal

**Estimated cost of lodging:** 0 INR / Month  
**Estimated cost of living incl. lodging:** 4500 INR / Month

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### Additional Information

For more information about the local committee: <http://explore.iaeste.in/mu>

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### Nomination Information

**Deadline for nomination:** 15-MAR-2020

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**Date:** 02-FEB-2020  
**On behalf of receiving country:** Siddharth Chadha