

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY
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A Project Report on

SELF HEALING ROBOTICS

(KSCST Approved Project)

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ABSTRACT

In the past decade, many scientists and researchers have designed and developed many robotic modules. Many concepts have been developed and one amongst them is self reconfiguration. The self reconfiguration robots have the ability to change shapes and functions according to the environment. The problem that arose with the concept of self reconfiguration was that, once damaged it did not have capability to recover itself. The solution was to provide the system with the ability to heal itself. Hence this project “*Self healing robotics*”.

The three principles that goes along with this project are detection of flux cutting, using an advanced protocol to communicate (I2C protocol) and the main principle of mutual attraction. When the broken module detects its counterpart and attaches itself to it, the movement of arm is actuated. Hence the system is restored to its original state of operation, without any human intervention. In the process time to recover, human labour cost can be reduced. Hence the self healing capability creates a series of next generation robots, which can be applied to industrial and military domains.