

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
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A REPORT ON PROJECT WORK

“HUMAN FALL DETECTION USING MEMS ACCELEROMETER ”
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ABSTRACT:

This report deals about fall detection using MEMS accelerometer. Rapid detection of fall events can reduce the rate of mortality and raise the chances to survive the event and return to independent living. In the last two decades, several technological solutions for detection of falls were published, but most of them suffer from critical limitations.

In recent years, technological advances in micro-electromechanical system (MEMS) acceleration sensors have made it possible to design fall detectors based on a 3-axis integrated MEMS accelerometer. The technique is based on the principle of detecting changes in motion and body position of an individual, wearing a sensor, by tracking acceleration changes in three orthogonal directions. The data is continuously analyzed algorithmically to determine whether the individual's body is falling or not. If an individual falls, the device can employ GPS and a wireless transmitter to determine the location and issue an alert in order to get assistance.