**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

**“Jnana Sangama”, Belgaum -590014, Karnataka.**

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**PROJECT PHASE 1 REPORT**

**on**

**COGNITIVE APPREHENSIVE DEVICE**

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***in partial fulfillment for the award of the degree of***

**BACHELOR OF ENGINEERING**

***in***

**COMPUTER SCIENCE AND ENGINEERING**



**BMS COLLEGE OF ENGINEERING**

**(Autonomous Institution under VTU)**

**BENGALURU-560019**

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**CERTIFICATE**

This is to certify that the project work entitled “Cognitive Apprehensive Device” carried out by Mr. Pronoy Dalal (IBM12CS079) Ms. Prerna Bajaj (1BM12CS088), Ms. Raksha Desai (1BM12CS088) and Mr. Vardaan Tyagi (1BM12CS138), who are bonafide students of **B M S College of Engineering.** It is in partial fulfillment for the award of **Bachelor of Engineering in Computer Science and Engineering** of the Visvesvaraya Technological University, Belgaum during the year 2015-2016.The project report has been approved as it satisfies the academic requirements in respect of **Project Phase I (11CI7GCPPI)** work prescribed for the said degree.

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**ABSTRACT**

“Cognitive Apprehensive Device” is a wearable device used for security purpose. This device is being formulated for the society, especially for the safety of women, which is a major concern in today’s life. This fact has motivated us to contribute towards the field of safety. Although there exists several devices in the market pertaining to safety, they have not produced the desired results because of their inability to function effectively during critical situations. The main problem concerning these existing devices is that they require the user’s interaction with device to get activated which is very difficult in a real life scenario. Our device on the other hand is an innovative device that you don’t need to press or squeeze to activate when the user is in danger. This device connects to a BLE enabled smartphone directly. This device contains a tri-axes accelerometer which is governed by an arm-cortex mo+ microprocessor. The accelerometer detects a motion (push, pull or tug) and sends these readings to the microprocessor. The microprocessor contains an algorithm, which compares this motion with a predetermined threshold value, there by activating the device.

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