

**Perancangan Helm Pintar Berbasis Mikrokontroler Atmega 328 Untuk
Pendeteksi Kecelakaan** (*Atmega 328 Microcontroller Based Smart Helmet*

Design For Accident Detection)

Pembimbing (Mochamad Irwan Nari, ST, MT)

Guruh Priambodo

Study Program of Automotive Engineering

Majoring of Engineering

Program Studi Mesin Otomotif

Jurusan Teknik

ABSTRACT

In Indonesia, a helmet is one of the safeguards for motorcycle users. However, the death rate from motorcycle accidents is still high. This is due to other factors, namely the loss of concentration of the driver due to operating a smartphone while driving. In addition, the delay in handling accidents resulting in delays to the nearest hospital or puskesmas is also a factor in the death of motorbike users. Thus, a device that can provide information to hospitals or related institutions is needed to minimize the use of smartphones while driving. This final project is to design a helmet that can detect rider accidents while on the road. Using the MPU 6050 module and SIM800L GSM module. The results of this study indicate that the fall detector has a sensitivity level of 80%, 80% accuracy and 100% sensor precision. This tool functions properly in the event of an accident and can send SMS and locations to the numbers that have been set in the program. With the addition of this tool, if a driver has an accident on the road, he can send an SMS and location to the number that has been set in the program, so that the family or the nearest health center can find out where the driver fell.

Keyword: smart helmet, mpu6050, fall detection