

5 Conclusion

In this paper, three levels of detection and control of drunken driving system is demonstrated through internet of things using Raspberry pi-3 as main control unit. The system automatically detects whether the driver is drunk or not and prevent him from driving the vehicle by turning off the ignition system. It also sends messages to concerned people.

One of the most robust level of detection and control used here is facial recognition technique which is an eye based control. In future, control of all types of devices will be based on Eye based control, thus control operation becomes much easier and comfortable with less human presence. Many operations which are risky can be performed easily by this kind of application. Further study and research on these technologies results in creation of new trend of interacting with machine so called machine learning.

References

- [1]. Datafrom NCRB, Government of India, available at <http://ncrb.nic.in/StatPublications/ADSI/ADSI2015/ADSI2014.asp>.
- [2]. "Internet of Things Global Standards Initiative". ITU. Retrieved 26 June 2015. <http://www.itu.int/en/ITU-T/gsi/iot/Pages/default.aspx>
- [3]. Z. Xiaorong et al, "The Drunk Driving Automatic Detection System Based on Internet of Things", International Journal of Control and Automation, Vol .9, No.2, 2016,pp.297-30-[4] <https://www.sparkfun.com/datasheets/Sensors/MQ-3.pdf>
- [4]. Dai, J. Teng, X. Bai, Z. Shen, and D. Xuan. "Mobile phone based drunk driving detection." In 2010 ,4th International Conference on Pervasive Computing Technologies for Healthcare, pp. 1-8. IEEE, 2010.
- [5]. A. R. Varma, S. V. Arote, C. Bharti, and K. Singh. "Accident prevention using eye blinking and head movement." IJCA Proceedings on Emerging Trends in Computer Science and Information Technology-2012 (ETCSIT2012) etcsit1001 4 (2012): 31-35
- [6]. V. Savania, H. Agravata and D. Patela , "Alcohol Detection and Accident Prevention of Vehicle", International Journal of Innovative and Emerging Research in Engineering, Volume 2, Issue 3, 2015, pp 55-59 .<http://www.dadss.org/breath-based-technology>.
- [7]. Viswanatha V, Venkata Siva Reddy R and Ashwini Kumari P. "Multilevel Home Security System using Arduino and GSM." Journal 4 Research 4.10(2018):1-6.
- [8]. Devopedia. 2019. "Raspberry Pi." Version 4, March 24. Accessed 2019-06-07.<https://devopedia.org/raspberry-pi>.
- [9]. J. Dai, J. Teng, X. Bai, Z. Shen and D. Xuan, "Mobile phone based drunk driving detection," 2010 4th International Conference on Pervasive Computing Technologies for Healthcare, Munich, 2010, pp. 1-8, 2010.
- [10]. S. Aravind, T. Karthick and U. Sakthivel, "E-Eyanthra Perspiration based drunken driving prevention system," 4th International Conference on New Trends in Information Science and Service Science, Gyeongju, 2010, pp. 270-274.
- [11]. K. Murata et al., "Noninvasive Biological Sensor System for Detection of Drunk Driving," in IEEE Transactions on Information Technology in Biomedicine, vol. 15, no. 1, pp. 19-25, Jan. 2011.
- [12]. M. Sakairi, "Water-Cluster-Detecting Breath Sensor and Applications in Cars for Detecting Drunk or Drowsy Driving," in IEEE Sensors Journal, vol. 12, no. 5, pp. 1078-1083, May 2012.
- [13]. M. V. Ramesh, A. K. Nair and A. T. Kunnathu, "RealTime Automated Multiplexed Sensor System for Driver Drowsiness Detection," 2011 7th International Conference on Wireless Communications, Networking and Mobile Computing, Wuhan, 2011, pp. 1-4.
- [14]. W. Dong, C. Q. Cheng, L. Kai and F. Bao-hua, "The automatic control system of anti drunk-driving," 2011 International Conference on Electronics, Communications and Control (ICECC), Ningbo, 2011, pp. 523-526.