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Systematic Literature Review: 5 Years Trend in the Field of Software Engineering

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As a researcher, it is important to be able to focus our effort and time in contributing to new knowledge in the area that are specialize with and relevant to current research trends. It is also a main issue that is focusing our effort in the field that are growing. The objective of this paper is to identify the different fields of software engineering that are currently on the rise and areas that are falling. A methodology that involve comparison and analysis of systematical assigned keyword of papers that was published in related Q1 journals is being used to identify the current trend in the field of software engineering .Based on the result of the analysis of the IEEE Transaction in Software Engineering journal with its three systematic keyword system used, it is shown that the area of Testing (Testing and Program verification) is steadily increasing and being the preferred area of research for authors during 2012 to 2016. For future research, it is suggested that the number of journal that uses a systematical way of keyword assignment could be increase in order to strengthen the justification of current trends in the field of software engineering.

Keywords: Software Engineering, Trend, IEEE, ASE, TOSEM

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Application of Fuzzy Logic Controller for Safe Braking System: An Anti-Theft Tracking

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Automotive security has become more challenging with the increasing of sophisticated modern technologies nowadays. While the transformation of automotive has brought major advancement in efficiency, it also led to the possibility of new threats in automotive field such as vehicle theft. In Malaysia, an average of sixty vehicles get stolen every day. Numbers of vehicle's security and safety devices or system has been marketed such as safety alarms, door jammer, gearshift lock and global positioning system (GPS) tracker. However, there are also few limitations of these devices such as easily disable, notify false alarm and requires strong cellular network for continuous tracking. This paper describes the preliminary research and application of fuzzy logic based controller for braking system of stolen vehicle. In our future study, this system will be incorporated in the anti-theft tracking device with smartphone integration. In this study, two input parameters are considered which are the vehicle velocity and the sight distance. The proposed system will assist the user or vehicle owner to decide for safe braking control. Thus, reduce the risk of property loss or life loss.

Keywords: Automotive Security, Anti-Theft System, Fuzzy Logic Controller, Braking System, Computational Intelligence