

Pengukuran kelelahan pengemudi pria berdasarkan parameter visual mata dengan metode eye-tracking = Male driver fatigue measurement based on blinks and saccades using eye-tracking method

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Abstrak

[ABSTRAK

Kecelakaan lalu lintas merupakan pembunuh terbesar ketiga di Indonesia setelah jantung koroner dan tuberkulosis, dimana salah satu penyebabnya adalah kelelahan pengemudi. Tujuan dari penelitian ini untuk memperoleh tingkat kelelahan pengemudi pria saat menyetir setelah beraktivitas secara real condition menggunakan metode eye tracking dengan parameter visual mata, sehingga jumlah kecelakaan lalu lintas menurun. Melalui studi kelelahan ini akan didapatkan perubahan aktivitas mata pengemudi berdasarkan gerak cepat mata (saccade) dan kedipan mata (eye blink) sehingga dapat disimpulkan batas waktu mengemudi yang disarankan bagi pengemudi pria. Penelitian ini melibatkan lima orang responden pria usia produktif yang diukur tingkat kelelahannya menggunakan eye tracker. Hasil dari penelitian ini didapatkan bahwa parameter kedipan mata (eye blink) lebih sensitif dalam mengukur kelelahan dibandingkan gerak cepat mata (saccade) dan berdasarkan parameter kedipan mata (eye blink) dihasilkan kesimpulan kelelahan pada pengemudi pria dapat terjadi sejak menit ke-30 hingga menit ke-40. Kesimpulan tersebut dapat dijadikan acuan bagi pengemudi pria untuk meningkatkan kewaspadaan jika mengemudi melebihi waktu tersebut.

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ABSTRACT

One cause of traffic accidents -third largest killer in Indonesia after coronary heart disease and tuberculosis- are driver fatigue. The purpose of this study was to measure male driver's fatigue using eye tracking method based on blinks and saccades. From this study we could find out suggested driving time limit for male drivers from driver's eye activity changes, based on blinks and saccades. The study involved five male respondents of productive age using eye tracker. The results of this study are that blinks is more sensitive in measuring fatigue than saccades and fatigue may occur in male drivers since the 30th to 40th minute. The conclusion can be used as a reference for male drivers to increase their vigilance when driving exceeds the time.;One cause of traffic accidents -third largest killer in Indonesia after coronary heart disease and tuberculosis- are driver fatigue. The purpose of this study was to measure male driver's fatigue using eye tracking method based on blinks and saccades. From this study we could find out suggested driving time limit for male drivers from driver's eye activity changes, based on blinks and saccades. The study involved five male respondents of productive age using eye tracker. The results of this study are that blinks is more sensitive in measuring fatigue than saccades and fatigue may occur in male drivers since the 30th to 40th minute. The conclusion can be used as a reference for male drivers to increase their vigilance when driving exceeds the time., One cause of traffic accidents -third largest killer in Indonesia after coronary heart disease and tuberculosis- are driver fatigue. The purpose of this study was to measure male driver's fatigue using eye tracking method based on blinks and saccades. From this study we could find out suggested driving time

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