

## **BAB V**

### **KESIMPULAN DAN SARAN**

Pada bab ini memaparkan terkait kesimpulan dan saran dari hasil penelitian yang telah dilakukan. Kesimpulan diambil dari hasil pengolahan data yang didapat dan saran yang dipaparkan ditujukan untuk penelitian yang dilakukan selanjutnya.

#### **V.1 Kesimpulan**

Berdasarkan penelitian yang telah dilakukan kesimpulan yang dapat diambil adalah sebagai berikut:

- a. Berdasarkan hasil pengujian uji MANOVA dan ANOVA, dapat ditarik kesimpulan bahwa durasi tidur mempengaruhi tingkat kantuk dan tingkat kewaspadaan seseorang. Pada uji MANOVA dihasilkan nilai  $p = 0,022$  dan untuk uji ANOVA pada masing-masing variabel dependen menghasilkan nilai  $p < 0,05$ . Hasil tersebut menunjukkan durasi tidur berpengaruh secara simultan serta mempengaruhi nilai dari HR, EAR, MAR, dan posisi kepala pada sumbu x, y, dan z.
- b. Berdasarkan hasil pengujian uji korelasi, dapat ditarik kesimpulan bahwa durasi tidur memiliki hubungan yang kuat dengan variabel HR, EAR, dan posisi kepala pada sumbu z. Hal ini didasari oleh nilai korelasi yang dihasilkan untuk variabel HR sebesar 0,741, variabel EAR sebesar 0,763, dan variabel posisi kepala pada sumbu z sebesar -0,650 sehingga ketiga variabel tersebut memiliki nilai  $r$  hitung  $>$   $r$  tabel dengan  $r$  tabel memiliki nilai 0,497.
- c. Berdasarkan hasil pengujian maka dapat ditarik kesimpulan parameter wajah yang dipengaruhi ketika tingkat kewaspadaan menurun adalah bagian mata dengan menunjukkan nilai rasio yang semakin mengecil dan sikap tubuh yang dipengaruhi adalah perubahan posisi kepala pada sumbu z dengan menunjukkan perubahan yang semakin membesar dari posisi awal kepala.

## V.2 Saran

Berdasarkan penelitian yang telah dilakukan berikut merupakan beberapa saran yang dapat diberikan untuk penelitian selanjutnya terkait pendeteksian dengan metode *non-intrusive* untuk mengetahui tingkat kewaspadaan pengemudi:

1. Menggunakan acuan fisiologis tubuh lain atau mengembangkan penelitian yang telah dilakukan dengan menggunakan *heart rate variability* karena acuan fisiologis tersebut dapat mengukur tingkat kewaspadaan seseorang dengan lebih presisi dibandingkan dengan *heart rate*. Namun penggunaan metode tersebut perlu menggunakan alat ukur dengan kualitas yang lebih baik dibandingkan *smartwatch* pada umumnya.
2. Menggunakan paramater wajah dan sikap lainnya agar semakin mengetahui gejala yang ditunjukkan pengemudi ketika tingkat kewaspadaan menurun dengan harapan nantinya penelitian dapat membantu dalam pengembangan alat pendeteksi tingkat kewaspadaan *non-intrusive* untuk pengemudi.
3. Mengembangkan *syntax* yang telah digunakan agar hasil pendeteksian menggunakan pemrograman dapat menghasilkan *output* yang lebih valid mengingat masih ditemukan keterbatasan pada *syntax* yang digunakan oleh peneliti.

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