

UNIVERSITI TEKNOLOGI MARA

TECHNICAL REPORT

**ANALYTICAL HIERARCHY PROCESS (AHP) IN
EVALUATING PASSENGER SAFETY CONCERNS WHEN
USING E-HAILING SERVICES**

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IN THE NAME OF ALLAH, THE MOST GRACIOUS, THE MOST MERCIFUL

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ABSTRACT

Most users assess e-hailing services based on their worries about passenger safety before using them. Furthermore, many safety incidents involving e-hailing services have happened, negatively affecting incidents like car crashes, sexual harassment, or the worst criminal instances. Consequently, the popularity of e-hailing services has sparked apprehensions regarding passenger safety, encompassing data privacy breaches, accidents caused by human errors, criminal activities by drivers, instances of sexual harassment and assault, and vehicle malfunctions due to inadequate inspection and maintenance. These concerns emphasize the importance of improved regulations, awareness initiatives, and safety measures to safeguard e-hailing passengers. This study paper discusses several passenger safety issues linked to e-hailing safety to get a thorough understanding, including data privacy, driver's road manners, sexual harassment, safety tracking, and vehicle safety by referring to prior research; identify the most concerning safety element to e-hailing users using AHP method; and analyze and rank the safety concerns elements and the alternatives. The methodology of this study comprises of data collection using a survey approach where the university students were the respondents. Analytic Hierarchy Process (AHP) was used to assess concerns about passenger safety when using e-hailing services among students at higher level education. AHP is used to evaluate the relative importance of each issue after surveying university students to determine their major security concerns. The study found that sexual harassment was the primary concern among respondents when using e-hailing services, as it carried the highest weightage compared to other criteria. Additionally, the sub-criterion of "Female for Female" showed that respondents favored the Riding Pink application, which offers female drivers exclusively for female passengers to mitigate sexual harassment risks. Lastly, Grab emerged as the top-rated application, surpassing both Riding Pink and MyCar, due to its comprehensive features and services provided to consumers. In conclusion, this study brought attention to the key safety element for e-hailing passengers and drivers, identified desired features for securing safety, and raised awareness about safety concerns during e-hailing rides.