

# A Study on How Front-View Proportion Influences the Beauty of Passenger Cars

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## ABSTRACT

While environment protection has become an inevitable issue nowadays, how to design a car with aesthetic durability is also becoming more and more important and worthy of further studying. Borrowing the idea from many references, which had showed attractiveness of averaging faces, this research tried to investigate if an average front-view profile of passenger car from existing models can be attractive. Thirty middle-size passenger cars with ten of each from American, European, and Asian car manufacturers were selected as samples. Average front-view profile was obtained by connecting the averaged normalized coordinates of control points of sample cars. Average positions of front-view elements, such as grille, headlamp, air intake, and fog lamp, were obtained similarly. Twenty subjects were invited to evaluate the attractiveness of front-view profiles of average car and four existing models. The result showed that the average side-view profile was considered as the most attractive one. In order to see how attractiveness changes if the forms of front-view elements are different, three sets of front-view elements were designed. By varying the size and position of those elements, five front-views for each set were generated, including one fitting the average proportion. Sixty subjects were invited to evaluate the attractiveness of five varying front-views of all three sets. The results also showed that in all three sets the ones fitting the average positions were considered as most attractive.

Keywords : Automobile, Front-View, Average, Aesthetics, Proportion

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