

# The Impact of Personality on Task-Performance in Assistive Human-Machine Interaction

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**Abstract**

In Human-Robot Interaction(HRI) domain, many researches emphasize the impact of the human user's personality (expressed mainly through the Extroversion dimension) over the perception of the robot's behavior. We designed a new drone driving task and we analyzed the role of each user BigFive Personality dimension in task performance and user's reaction towards the assistance system. The results show that three of BigFive Personality dimensions (Extroversion, Openness, and Agreeableness) have a certain influence towards participants' performance. For example, our results depict that Low-Extroversion participants have significantly the best performance comparing to the Average-Extroversion and High-Extroversion participants. Moreover, it is pointed out that the performance of the Low-Openness participants is significantly poorer than that of Average-Openness participants and that participants with Low-Agreeableness performed significantly better than the participants with High-Agreeableness. Therefore, we posit that personality is an important factor to take into consideration in the design of HMIs.