**2nd Continuous Evaluation, December 2023 (Group A)**

We have the following dataset (<https://www.uv.es/mperea/PLP2data.jasp>) with data from 400 participants in several variables.

1. Is there an association between smoking (yes/no) and being religious (yes/no)? Justify your answer, including the appropriate correlation index. (Copy/Paste the appropriate information from JASP)

2. We want to predict the scores in Extraversion from the scores in Anxiety, Wellbeing, and Neuroticism using a regression equation. The questions are: (a) which is the percentage of the variance of Extraversion that can be explained by the regression equation?; (b) which one is the best predictor and why? (Copy/Paste the appropriate information from JASP)

3. We have the following game in which we have to pay 10€ each time we play. We toss a coin two times. If we get 2 heads, we get 20€; if we get 2 tails, we get 20€. Would you play this game in the long run (i.e., would you expect to gain money)?

4. We want to call the 20% of the best students in Theoretical Physics for a potential award. From previous years, the distribution of marks in Theoretical Physics followed (approximately) a normal distribution with a mean of 60 and a standard deviation of 12. Which would be the cutoff point separating 20% of the best students from the rest? (Copy/Paste from Excel)