

P5.2 Statistics for Medicine

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Master of Advanced Studies in Medical Physics



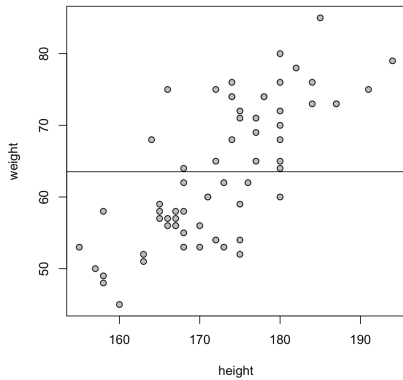
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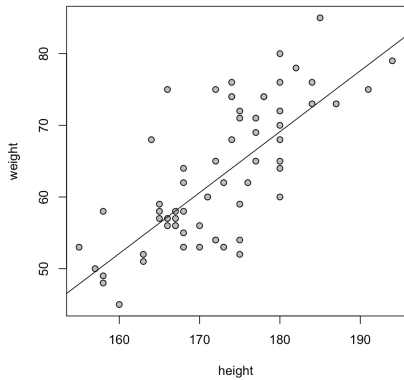
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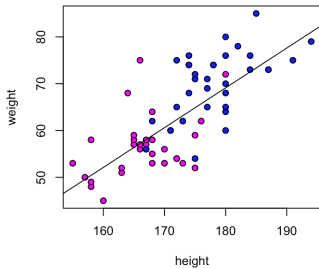
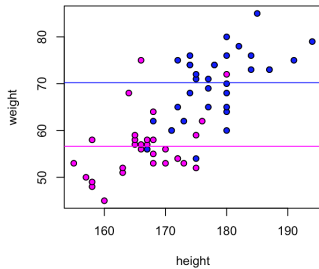
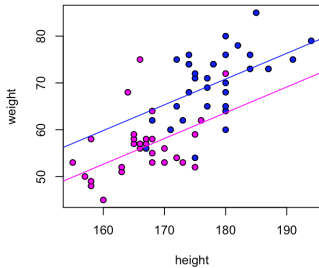
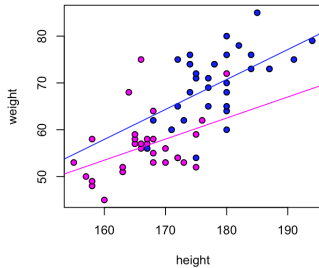


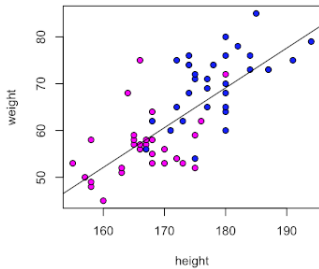
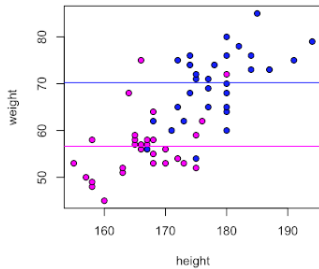
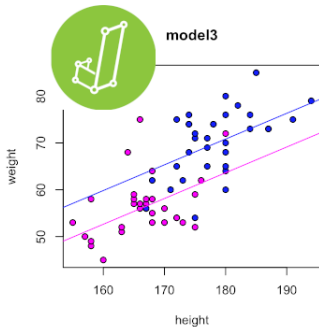
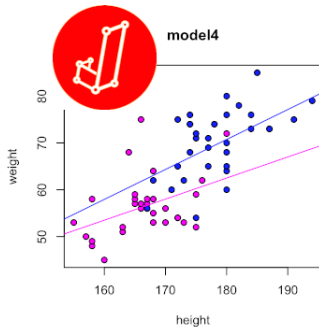
model0



model1



model1**model2****model3****model4**

model1**model2****model3****model4**

ANOVA Mixed Models Regression Frequentist

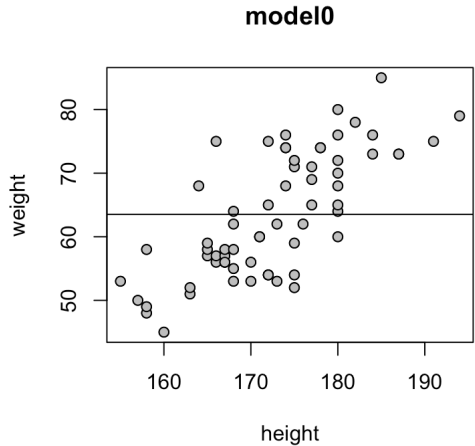
ANOVA
ANOVA
Repeated Measures ANOVA
ANCOVA
MANOVA

Bayesian
ANOVA
Repeated Measures ANOVA
ANCOVA

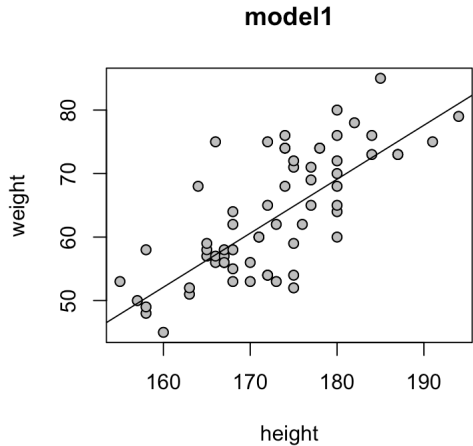
Regression
Classical
Correlation
Linear Regression
Logistic Regression

Bayesian
Correlation
Linear Regression

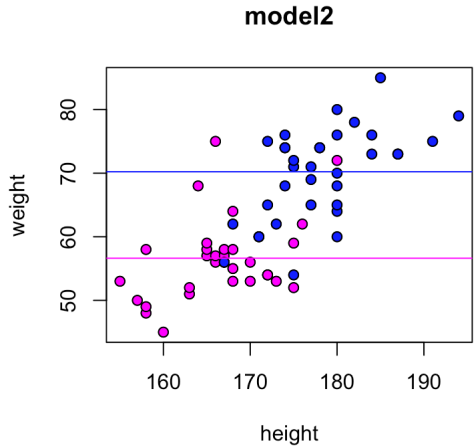
● weight ~ 1



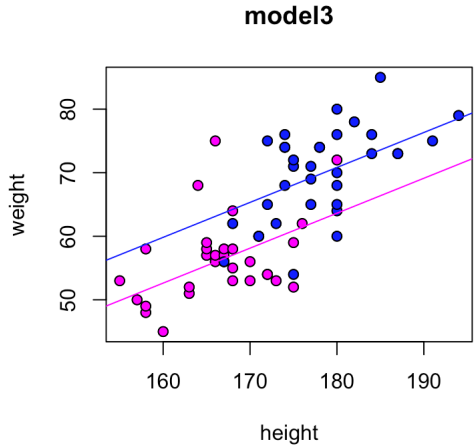
● `weight ~ height`



● weight ~ gender



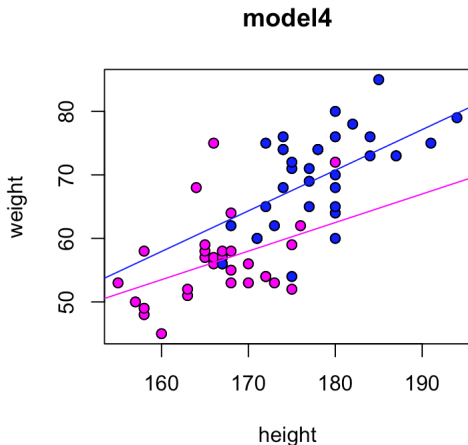
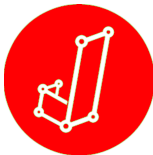
● $\text{weight} \sim \text{gender} + \text{height}$



● $\text{weight} \sim \text{gender} * \text{height}$

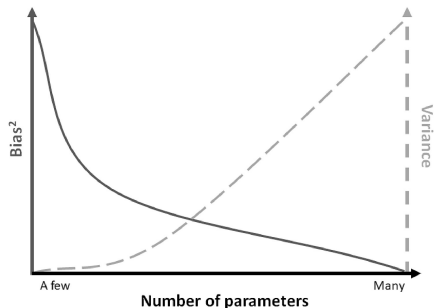
the same:

● $\text{weight} \sim \text{gender} + \text{height} + \text{height}:\text{gender}$



Hirotsugu Akaike

赤池 弘次



<https://www.sciencedirect.com/science/article/pii/S2468042719300508>