



CALIFORNIA SCIENCE & ENGINEERING FAIR 2019 PROJECT SUMMARY

Name(s) Yuansong Wang	Project Number S0832
Project Title Analysis of ADHD among Students	
<p style="text-align: center;">Abstract</p> <p>Objectives Coded for Logistic Regression and Artificial Neuron Network(package) in R language and tested the ADHD model accuracy with ROC.</p> <p>Methods Laptop computer with R language and packages. Analyze the data of 1752 school students from National Health Interview Survey with Logistic Regression model and Artificial Neuron Network and checked the model accuracy with ROC.</p> <p>Results With coefficients' exact numbers of different factors, I can use the logistic regression model to predict a person's probability of getting ADHD, and checked the results with ROC, getting 66 and 69 percent accuracy for logistic regression and Artificial Neuron Network.</p> <p>Conclusions I coded for logistic regression model and Artificial Neuron Network to test the factors of ADHD, and checked the model accuracy with positive distribution and Receiving Operation Characteristics. With my code I can analyze large amount of data to create a predicting model for the issues that have multiple factors.</p>	
Summary Statement I coded to analyze data with logistic regression model and Artificial Neuron Network and checked the accuracy of the two models with ROC.	
Help Received I programmed the logistic regression myself after an internet search on techniques, and the artificial neuron network and ROC are the packages pf R language tools.	