

Factors in Car Price Quotations  
(Technical Report)

The Struggle over Educational Technology  
in the United States  
(STS Research Paper)

An Undergraduate Thesis Portfolio  
Presented to the Faculty of the  
School of Engineering and Applied Science  
In Partial Fulfillment of the Requirements for the Degree  
Bachelor of Science in Computer Science

by

Serafettin Mert Ocal

May 10, 2023

## Preface

Technology can augment human innumerable cognitive tasks, for example in determining a bid price or in managing a classroom. Yet wherever human cognition and technological automation intersect, the optimum balance will be subject to debate.

What are the factors in car price quotations? Numerous criteria factor in an automobile's quoted price. An estimate of the relative importance of several attributes was derived from a large dataset. Besides affecting the car's price, an attribute can also affect the relative importance of other attributes. Six different plots showing the relationship between price, make, year, and mileage were obtained. These plots show if the price of a car is reasonable for its specifications. The cleaned dataset may be useful in the development of an algorithm that could estimate a car's price.

In the U.S. public schools, how are tech companies, school systems, K-12 teachers, parents and students competing to influence the proper place of edtech in the classroom? The best use of edtech in K-12 education in the United States is controversial. School districts, tech companies, K-12 teachers, parents, and students compete to determine how edtech should be used. Edtech raises problems of data privacy / security, and about whether it should supplement or displace traditional teaching methods. It also entails problems of training and support for teachers. Underlying the debate are fundamental differences in educational ideas and values. People who regard learning as the highest purpose of education tend to welcome edtech as a class of tools that can improve students' learning capacity and measure what they have learned. People who maintain that education serves purposes higher than learning, such as personal growth, autonomy, judgment, and communal harmony, tend to accept edtech in supplementary roles, while favoring direct interpersonal modes of education for most classroom activities.