

Can Physical Characteristics Predict Health Insurance Costs?

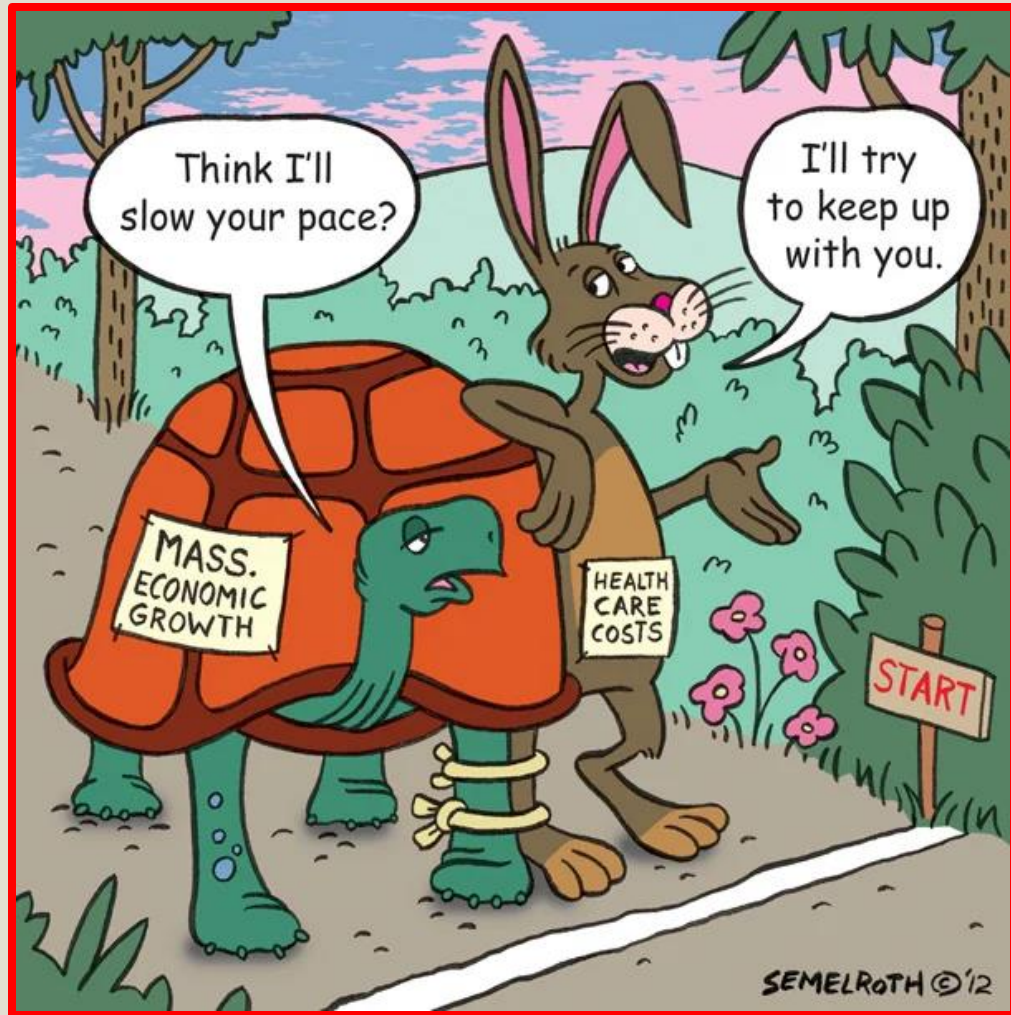
A Predictive Modeling Approach Using Machine

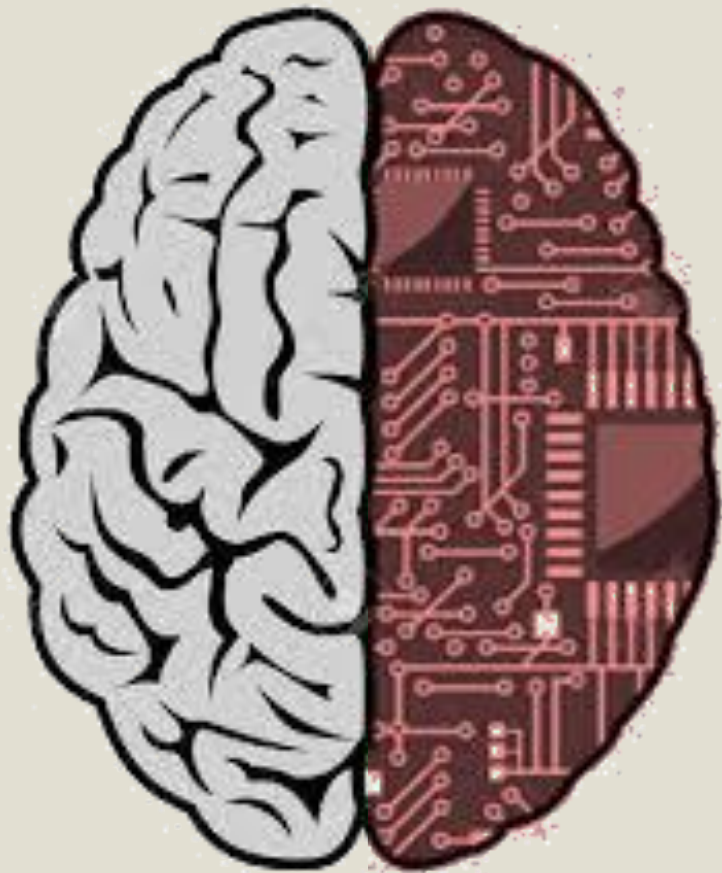


The image shows a medical invoice with a table of services and costs. The invoice is titled 'MEDICAL INVOICE' and includes a section for 'ACCOUNT SUMMARY' and 'PATIENT SERVICES PROVIDED'. The table lists various medical services and their corresponding costs. A calculator is visible in the background, suggesting the calculation of costs.

DESCRIPTION	AMOUNT
Office Visit	125.00
Lab Work	225.00
X-Rays / Abdominal	350.00
Surgery	7,500.00
Anesthesia	1,000.00
Pathology	531.00
Medical/Surgical Supplies	357.00
Post-Op Care	482.00
TOTAL	\$10,570.00
CLAIM	0.00
PAID	\$10,570.00

Spending in
the U.S. was
\$4.8
trillion..





**Insurers
need data-
driven tools
to manage
financial
risk.**

Who would Benefit



Insurance Analysts & Actuaries



Healthcare Policy Designers



Patients & Policyholders

The Dataset

kaggle

Medical Cost Personal Datasets

Insurance Forecast by using Linear Regression

Data Card

Code (1705)

Discussion (16)

Suggestions (0)

About Dataset

Context

Machine Learning with R by Brett Lantz is a book that provides an introduction to machine learning using R. As far as I can tell, Packt Publishing does not make its datasets available online unless you buy the book and create a user account which can be a problem if you are checking the book out from the library or borrowing the book from a friend. All of these datasets are in the public domain but simply needed some cleaning up and recoding to match the format in the book.

Content

Columns

age

sex

bmi

children

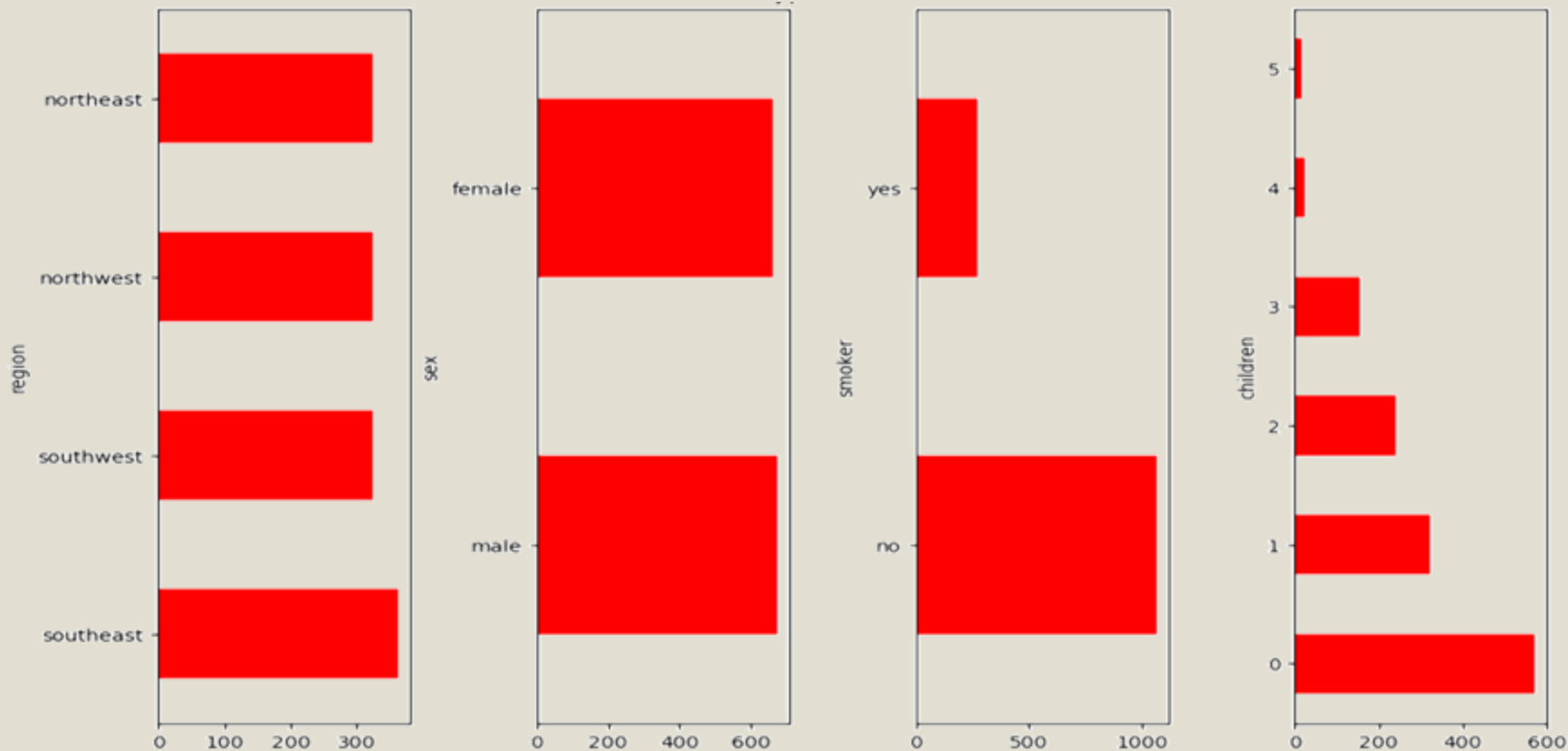
smoker

region

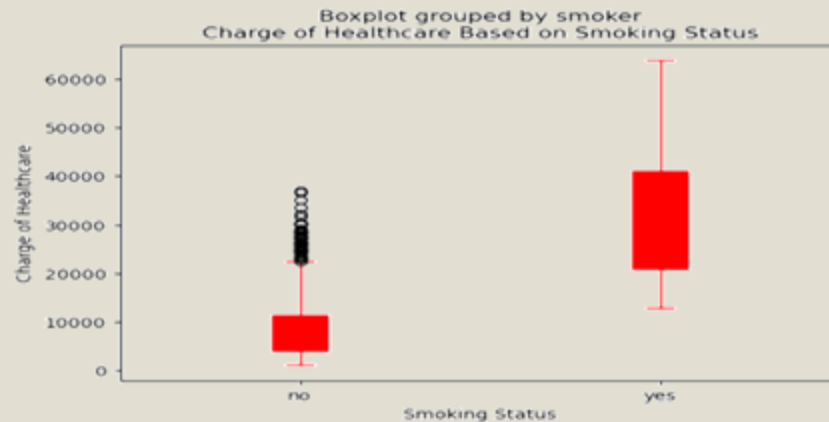
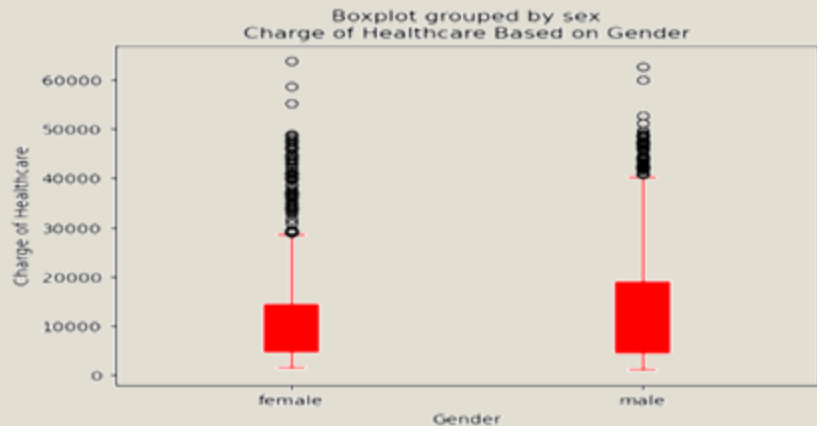
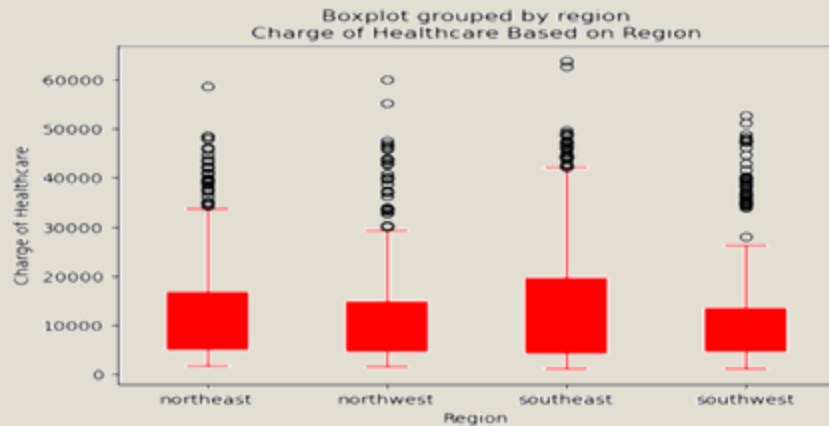
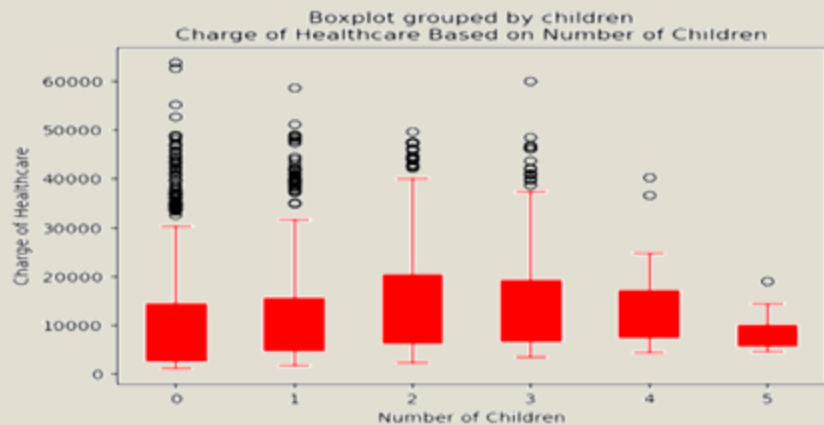
charges

Initial Observations

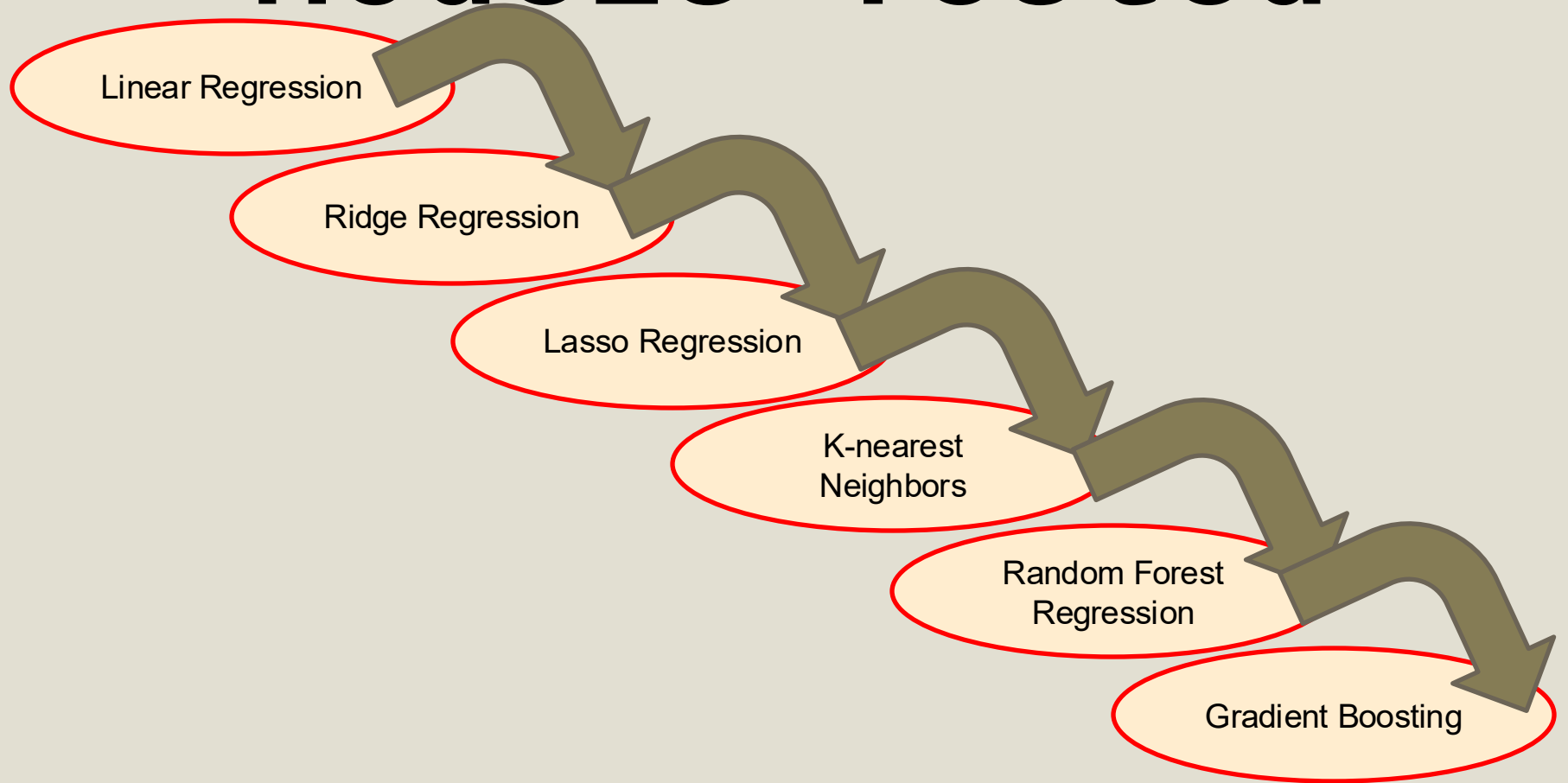
The Number of Individuals in Different Groups



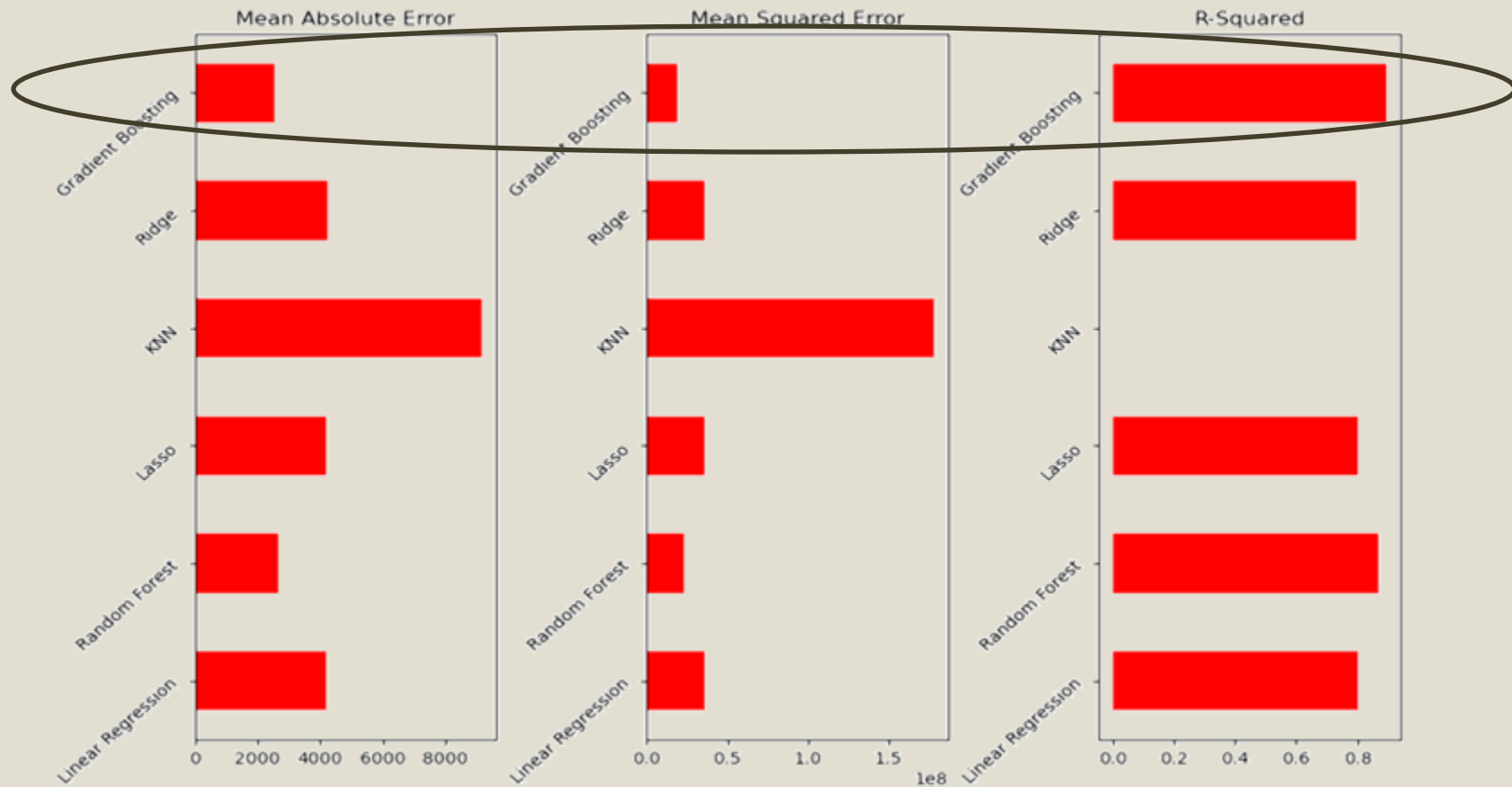
Group Distribution & Cost Spread



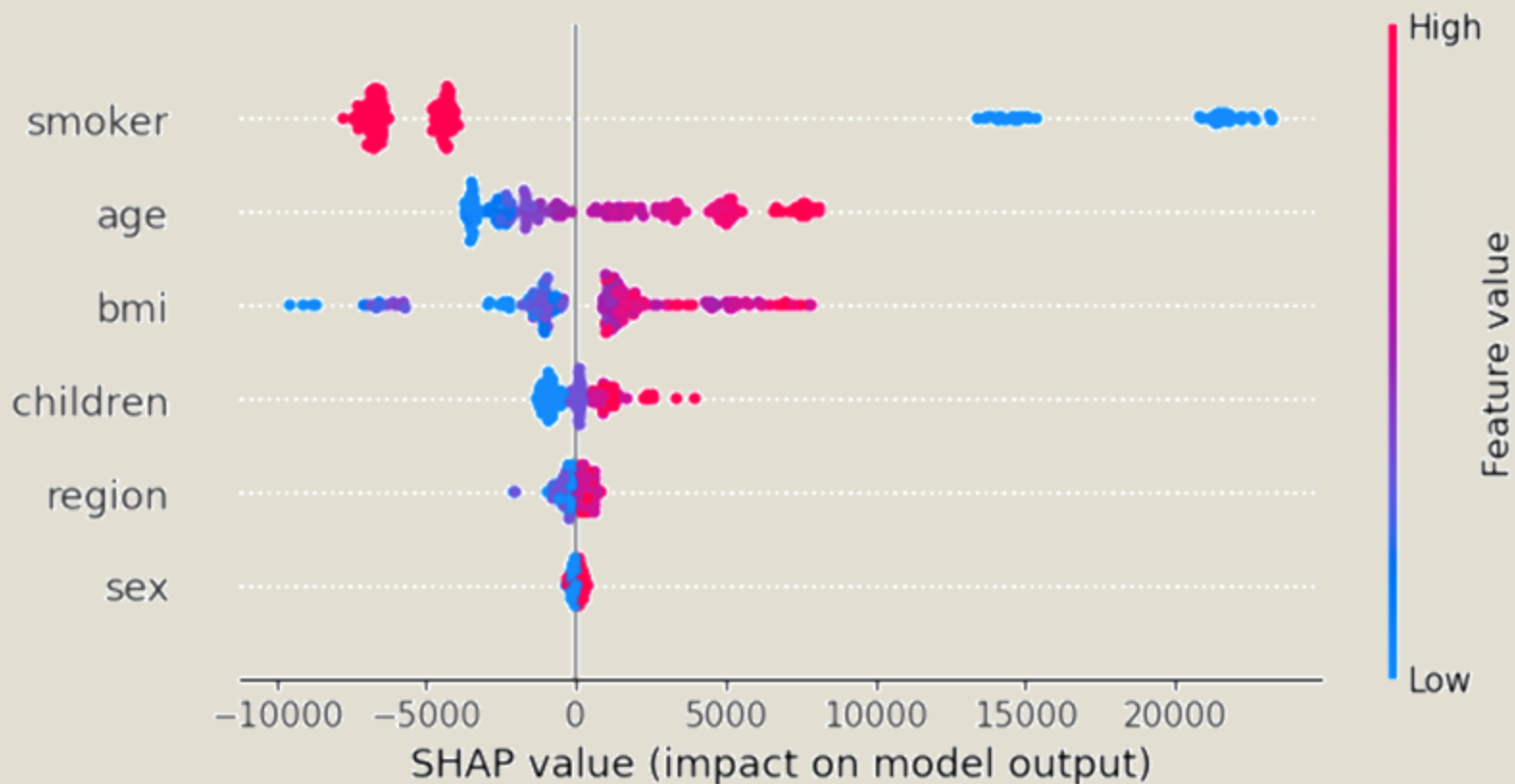
Models Tested



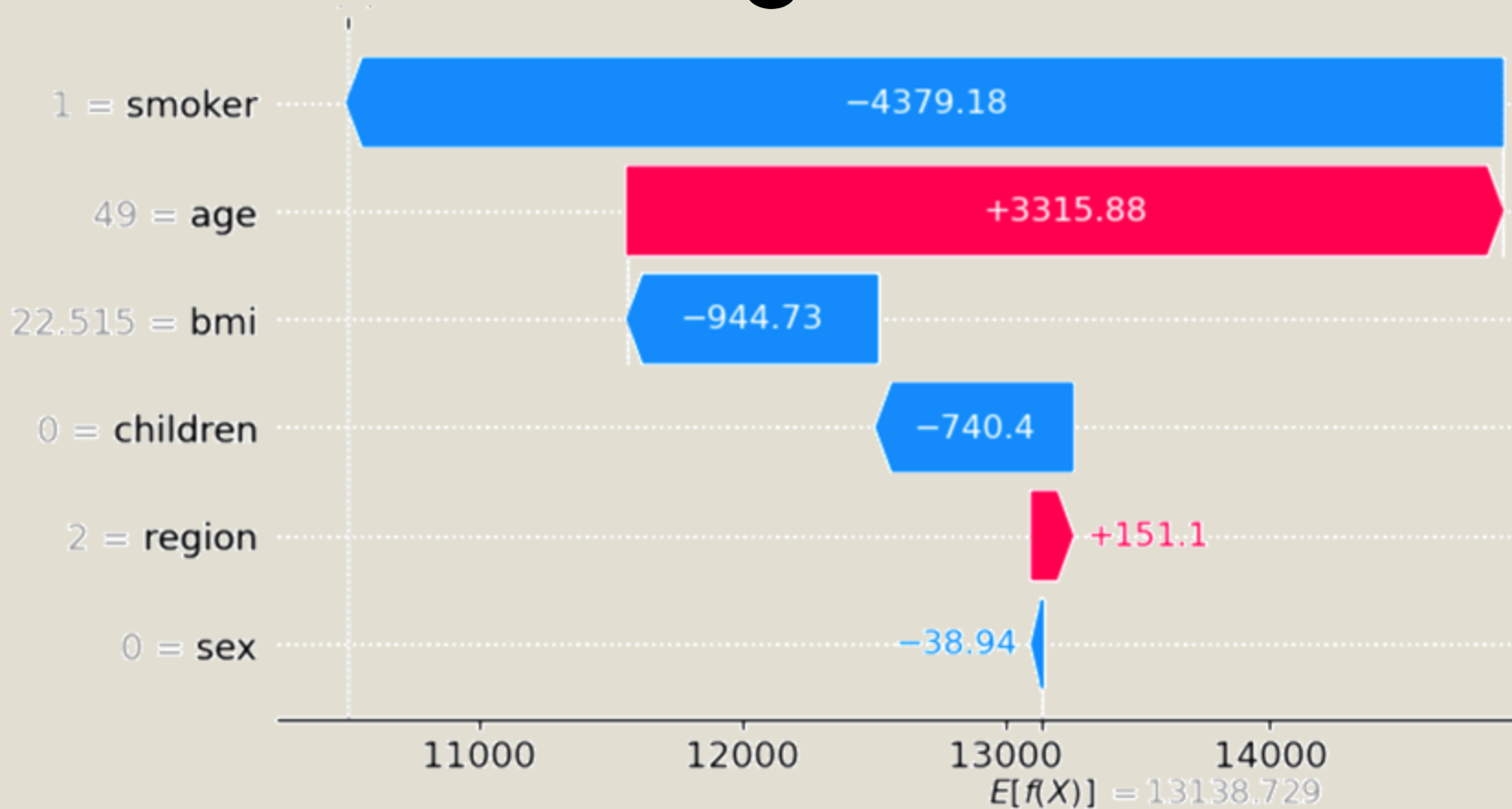
Top Performer: Gradient Boosting



Which Drives Insurance Cost?



Predicting the Cost



**Health Care
into
actionable
insights
Implications**

THANK YOU

