# Plan Purchasing Habits

BMI

From this graph we can see that for people who have extremely low BMI and are likely anorexic or have some form of nutritional problem, the Platinum plan is a much more preferred purchase. As customers' BMIs begin to reach the obese territory there is an uptick in Bronze, Gold and Platinum plans sold while less Silver plans are sold. This could indicate the purchasing selections of customers who are wealthy versus those who are not.
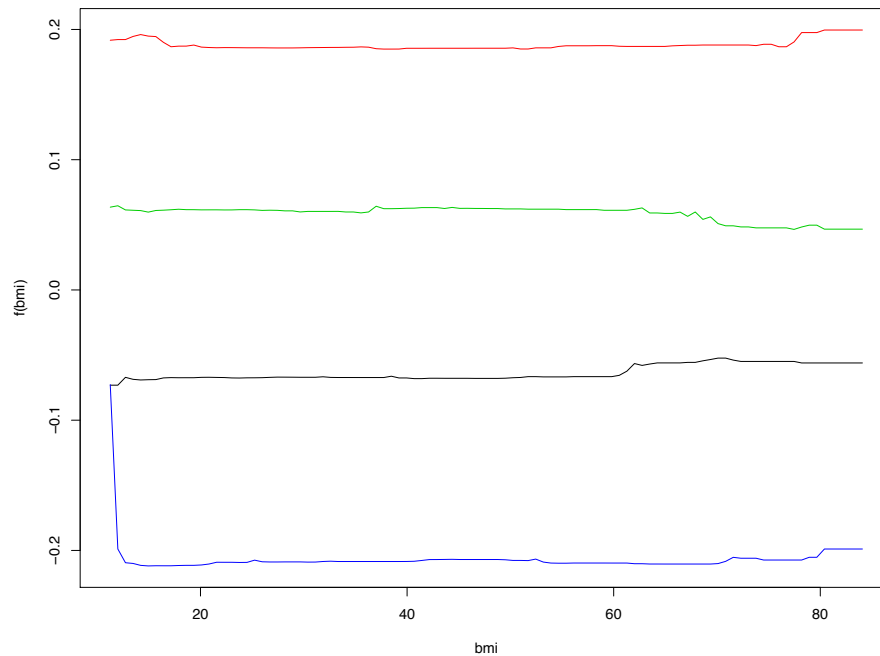

Income Compared to State Average

Although almost all of the customers in our data set were wealthier than the state average, an interesting pattern to note is when the customer had an income that was significantly higher than the state average. In this situation, purchases for the Bronze plan decreased while the Silver, Gold and Platinum saw increases, which makes sense as these people are able to afford the premiums.
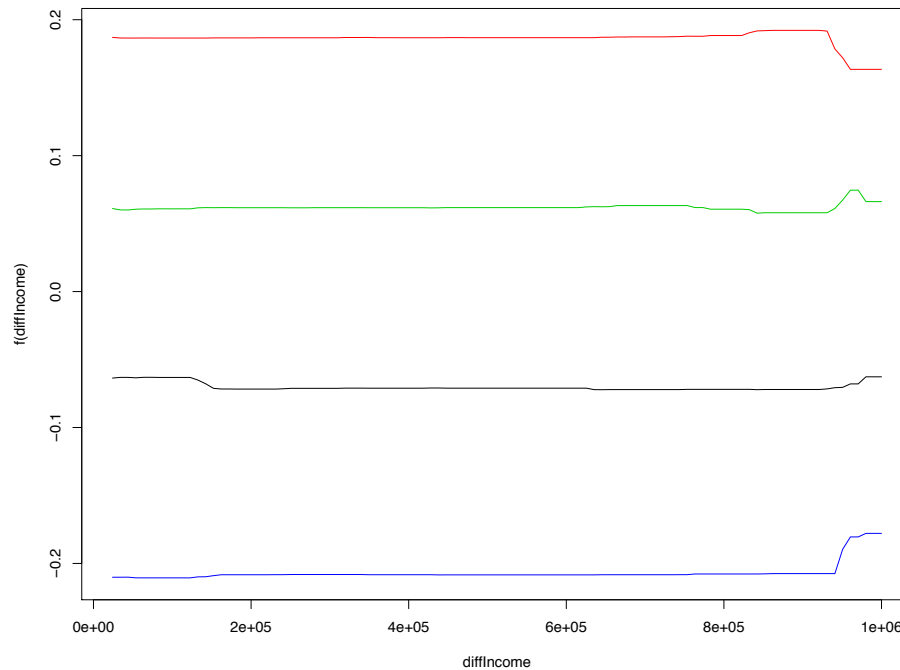
Silver vs. Bronze Premium Difference

From this graph we can see that interestingly, as the Silver plan monthly premium becomes much more expensive than the Bronze plan, there is an actual increase in sales in the Silver plan, as well as increases in Gold and Platinum plan purchases. The Gold and Platinum purchases could possibly be customers who think "might as well purchase the better plan if I'm spending so much money". The Silver purchase increases are more difficult to explain, but one reason could be customers who see the large price difference and thus are lead to believe that the Bronze plan is an incredibly inferior product to the other more expensive plans.
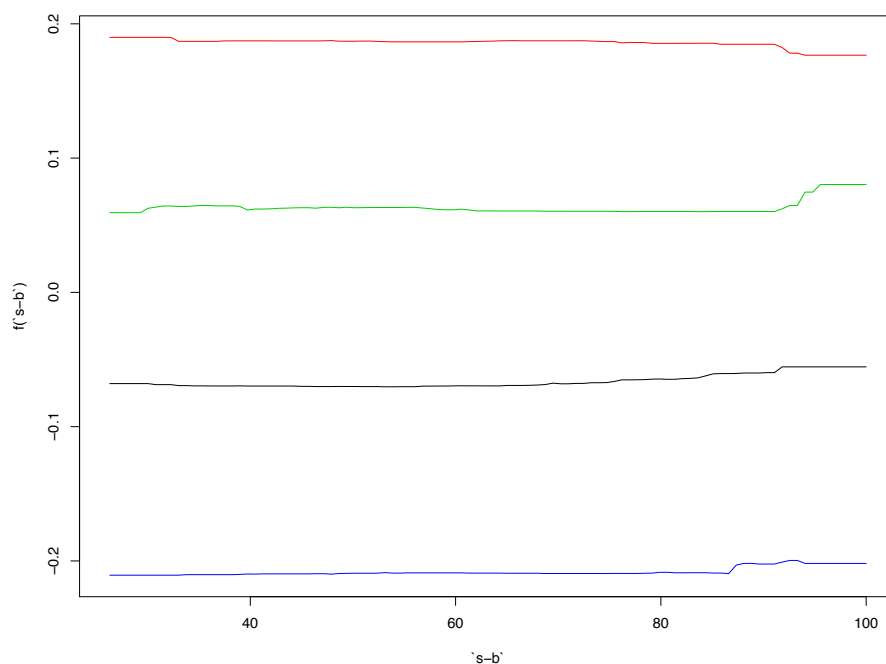
Influence of Factors

Here is a list of all the significant factors that were used in this data mining exercise, along with the percent influence on the final result. The factors are ranked in descending order based on their influence percent.

Variable	Influence
BMI	18.7%
Income Compared to State Average	13%
Silver-Bronze Premium Difference	11.9%
Weight	10.8%
Platinum Premium Price	7.2%
Height	7.2%
Bronze Premium Price	6.1%
Silver Premium Price	5.2%
Average Income of State	3.9%
Age	3.8%
Marital Status	3.4%
Gold Premium Price	3.3%
Smoker?	1.2%
Risk of Type 2 Diabetes	0.96%
Insured Amount	0.8%
Annual Income	0.5%
Risk of Cerebral Palsy	0.44%
Gender	0.41%
Risk of Heart Beat Abnormality	0.38%
Risk of Diarrhea	0.23%
Risk of Cough with Hemorrhage	0.13%
Risk of Hepatitis B	0.12%
Risk of HIV	0.11%