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Data Science Career Track

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**Healthcare Insurance Marketplace** - Inferential Statistics.

In this report, I have discussed the approach involved in using Inferential Statistics in my first capstone project healthcare insurance marketplace or exchange.

**Predictive Model:** The capstone project has a predictive model which predicts the individual rates and individual tobacco rates. These rates are nothing but the monthly premium we pay for our health insurance. So this model predicts the rates based on the several factors(independent variable).

**Regression**: I have used regression to predict the continuous variable i.e. price of the health insurance. I have used 3 different models to predict the rates and then compared which one is the best or in other words which one has the best performance in predicting the unseen data.

**How premiums are set**  
Under the health care law, insurance companies can account for only 5 things when setting premiums.

**1.Age:** Premiums can be up to 3 times higher for older people than for younger ones.

**2.Location:** Where you live has a big effect on your premiums. Differences in competition, state and local rules, and cost of living account for this.

**3.Tobacco use:** Insurers can charge tobacco users up to 50% more than those who don’t use tobacco.

**4.Individual vs. family enrollment:** Insurers can charge more for a plan that also covers a spouse and/or dependents.

**5.Plan category:**There are five plan categories – Bronze, Silver, Gold, Platinum, and Catastrophic. The categories are based on how you and the plan share costs. Bronze plans usually have lower monthly premiums and higher out-of-pocket costs when you get care. Platinum plans usually have the highest premiums and lowest out-of-pocket costs.

Wherever it was possible I have tried to list out the importance of each independent variables in predicting the target variables.