interoffice memorandum

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| to: | Chief Executive Officer, General Casualty Kansas City |
| from: | Adam Jones |
| subject: | Fatal Crash Analysis Results |
| date: | 12/03/2017 |

I’ve reviewed 2011 fatal automobile accident data and have compiled some interesting results. The data shows that fatal automobile accidents tend to occur with the following characteristics:

1. Rural Areas
2. Male Drivers
3. Clear Conditions
4. Principal Arterials (High Capacity Roads)
5. Southern Region
6. Occur in first two months of year

My goal when looking at this data was to determine which variables are correlated to fatal automobile accidents. We can use the correlated variables to adjust polices and premiums. We can also use this information to help determine which region to expand to next, given that fatal accidents have a significant impact on our bottom line.

In terms of expansion, the data clearly shows that the Northeast region is the least likely to experience a fatal automobile accident. Southern and Midwestern regions have a high correlation with fatal automobile accidents, as produced by the predictive model below (lower number equals less accidents).

cluster Midwest Northeast South West

1 0.237 0.137 0.409 0.218

2 0.274 0.192 0.130 0.404

**Recommendations**

1. Expand into the Northeast
2. Target large cities and suburbs, avoid rural areas
3. Run safe-driving marketing campaigns starting in December, ending in February
4. Increase premiums for men vs women
5. Increase premiums for rural areas vs urban
6. Introduce new personal injury protection caps for urban areas