

Chopped Injuries Success Analysis

Gabriel Valenzuela

DSC 680: Applied Data Science





History of Chopped

- Competitive Cooking Show
- Mystery Ingredients each round
- Three Judges
- Contestants from various backgrounds
- Food Network





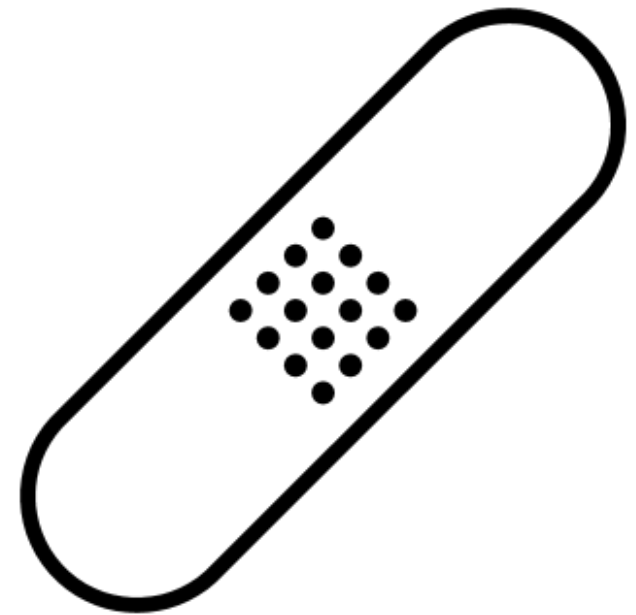
Rules of Chopped

- Appetizer, Entrée, and Desert Round
- Criteria for Elimination:
 - Presentation
 - Taste
 - Creativity of using basket ingredients
 - Last Round: Overall Performance
- Chopped Each Round



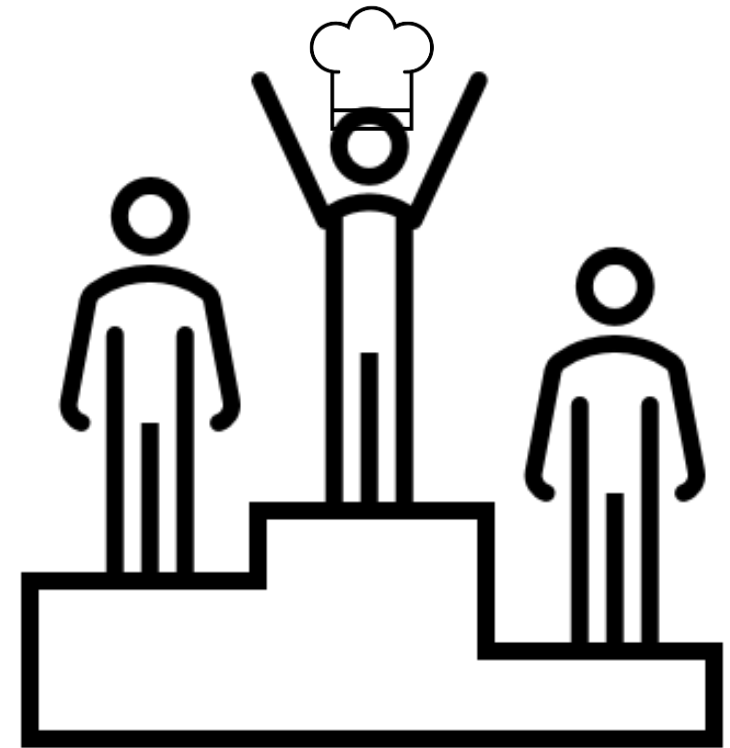
Injuries on Chopped

- Allowed to bring their own knife set
- Cuts and Burns
- Stress and Fast Paced
- Contamination of Food
 - Still able to compete



Reason for Analysis

- Always a possibility of injury
- Effects of Stress dealing with dangerous equipment
- Likelihood of being able to recover and win



Exploration and Data Preparation

- Determine key words of injury
 - Cut herself, burn himself, etc.
- Determine which chefs were injured and if they won
- Distribution of injured chefs
 - Across all aired episodes
- Categorical to numerical values



Feature Selection



- Developed features based on:
 - Judges
 - Contestants
 - Injuries
 - Winning Conestant
 - Winning Injured Contestant



Decision Tree Model

- Train/testing split on 70%/30% of data
- Model based on independent features and dependent responses
- Predict on training and testing data of features



Accuracy of Model

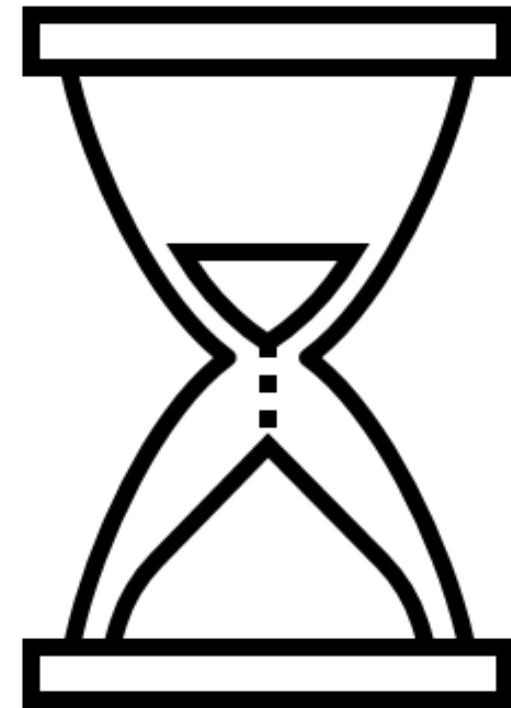
- About 95% accuracy
- Confusion Matrix Results

	Predicted Loss	Predicted Win
True Loss	164	0
True Win	7	0



Results of Injury

- Reported Injuries:
 - 35 either burns or cuts
- Injured Chefs that have won:
 - 7 contestants
- High contamination of food
- Loss of time





Possibilities of Competing

- Rate of Injury:
 - 6.17%
- Rate of Injury and Success:
 - 1.23%



Information for Future Contestants

- Avoid contamination of food
- Injury is not automatic loss
- Awareness of time
- Be safe



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Conclusion

- Near zero percentage of injured contestants win
- Each round and episode is different
 - No one episode is the same
- Various backgrounds of contestants
- Factors that contestants can control:
 - Speed
 - Knife Set





Acknowledgements

- Kaggle
 - Providing data source for analysis
- Chopped
 - Subject of analysis
- Bellevue University
 - Feedback from Professor Williams
 - Skills developed from coursework



References

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Questions

