1. The headline of the article I have read is “STUDY ON FEATURE SELECT BASED ON COALITIONAL GAME”
2. The article is written by students from Northeastern China University. It was printed in the journal “Intelligent Systems” in 2008.
3. The main idea of the article is to use cooperative game theory for feature selection problem. The authors got results are better than simple methods using Shapley values from cooperative game theory as evaluation criteria for selection.
4. The authors start by telling about how it is important to use feature selection algorithm for better model readability and understanding. The authors list some conceptually different but significant definitions of feature selection problem such as idealization, classical, improving and approximating class distribution. The arcticle describes that there are three common models used for feature selection: filter model, wrapper model and hybrid model. According to the text the authors use wrapper method using Shapley values as evaluation criteria for selecting. Futher the authors reports that their approach gets better model performance than filter model with mutual information criteria as evaluation. The article also says that Shapley values has useful property of fairness. It means that the total performance payoff will be evaluated between feature`s contribution in fair way. Thus, feature with small contribution will be removed. In conclusion, the authors compared the experiments results with other feature selection algortihms and in most cases they have better model performance.
5. I find the article interersting because it tries to use concepts from another domain to get better performance against common approaches.