Project proposal 1:

I'd like to do my project on the Smartphone-Based Recognition of Human Activities and Postural Transitions Data Set (http://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions). My interest in this is that it involves using smartphones, specifically a Samsung Galaxy S II. I plan to try to use various classifying and clustering methods to determine which one of those methods will most accurately classify the data. I will probably start by trying things like k-means and pca and then go on from there. My current goal is to see which classifying method will be the most accurate for the data. I have not gone through the papers yet, but these are the papers that I intend to go through, and I will determine which will be involved in the end result.

References:

- Jorge-Luis Reyes-Ortiz, Luca Oneto, Alessandro Ghio, Albert SamÃ¡, Davide Anguita and Xavier Parra. Human Activity Recognition on Smartphones With Awareness of Basic Activities and Postural Transitions. Artificial Neural Networks and Machine Learning â€“ ICANN 2014. Lecture Notes in Computer Science. Springer. 2014.

- Davide Anguita, Alessandro Ghio, Luca Oneto, Xavier Parra and Jorge L. Reyes-Ortiz. A Public Domain Dataset for Human Activity Recognition Using Smartphones. 21th European Symposium on Artificial Neural Networks, Computational Intelligence and Machine Learning, ESANN 2013. Bruges, Belgium 24-26 April 2013.

- Davide Anguita, Alessandro Ghio, Luca Oneto, Xavier Parra, Jorge L. Reyes-Ortiz. Energy Efficient Smartphone-Based Activity Recognition using Fixed-Point Arithmetic. Journal of Universal Computer Science. Special Issue in Ambient Assisted Living: Home Care. Volume 19, Issue 9. May 2013

- Davide Anguita, Alessandro Ghio, Luca Oneto, Xavier Parra and Jorge L. Reyes-Ortiz. Human Activity Recognition on Smartphones using a Multiclass Hardware-Friendly Support Vector Machine. 4th International Workshop of Ambient Assited Living, IWAAL 2012, Vitoria-Gasteiz, Spain, December 3-5, 2012. Proceedings. Lecture Notes in Computer Science 2012, pp 216-223.

- Jorge Luis Reyes-Ortiz, Alessandro Ghio, Xavier Parra-Llanas, Davide Anguita, Joan Cabestany, Andreu CatalÃ . Human Activity and Motion Disorder Recognition: Towards Smarter Interactive Cognitive Environments. 21th European Symposium on Artificial Neural Networks, Computational Intelligence and Machine Learning, ESANN 2013. Bruges, Belgium 24-26 April 2013.

Project proposal 2:

My other idea for a project is to do something with a parallax activity bot. If I can figure out if I can work with the data unsung propeller c, which is what I'm currently uncertain of, I would like to potentially teach the robot how to make shapes. My motivation for this one is based off of the paper I read for the midterm. If I did this option, I would need to create my own dataset of the shapes I order to teach the robot about how to classify the shapes. Ideally, the goal of this project is that the robot would then learn how to classify future shapes given to it on it's own and would be able to do it unsupervised.