



CS 6820 – Machine Learning

Lecture 14

Project 3 and Related References

March 5, 2018

Project 3

- Neural Network Based Gesture Recognition
 - Single hand snapshot gesture recognition
 - Dataset - Sebastien Marcel Static Hand Posture Database
 - S. Marcel. Hand posture recognition in a body-face centered space. In Proceedings of the Conference on Human Factors in Computer Systems (CHI), 1999.
 - <http://www.idiap.ch/resource/gestures/>
- Grading
 - Preferably forms teams of 4-5
 - Anyone not part of a team must still do a reasonable coding project to implement part of the model – however, no presentation required.
 - 20 minute presentations on 3/14 (more details TBD)
 - Lecture on your approach
 - Demonstration of your solution
 - Common code repository for review
 - Extra credit opportunities
 - One volunteer will drive all the model demonstrations
 - Volunteers appreciated to help class with training and test data prep.

Starting References

- Textbook - Introduction to Machine Learning
- Pattern Recognition and Machine Learning – Bishop (Chapter 5)
- A Brief Introduction to Neural Networks - Kriesel
- An Introduction to Artificial Neural Networks – Peterson & Rognvaldsson
- www.cs.cmu.edu/~awm (Regression and Classification with Neural Networks)
- YouTube: The Next Generation of Neural Networks (GoogleTechTalks)