Term Project Phase 3: Signal Alignment Requirements Analysis

(100 points)

Assigned Date: Monday, November 25, 2013

Due Date:

deadline: 4:00 PM Wednesday, December 4, 2013

Educational Goal

Become familiar with the WCL project and apply machine learning to signal alignment on temperature data and ISE reading.

Requirements

- Study Figure 3 of the Term Project Description, design two artificial signals (no WCL data at this phase!) that are offset in time domain and that do not have exactly same frequencies.
- Use local search the hill climbing method to find the best signal alignment result.
- Write a report to discuss
  - how to generate the artificial signals including offset in time domain with slightly different frequencies
  - how to use the hill climbing method to find the best alignment

Submission Requirements

1. One submission per team.
2. Submit all the scripts you used for this project.
3. Submit a single zipped file of all the files of this assignment through your UMassOnline account. Submit the paper copy along with the cover page in class. Paper copy should be bound firmly together as one pack (for example, staple, but not limited to, at the left corner). 5 points will be deducted for unbounded homework.
4. Name your file with AI_ lastname_firstname_team#_ph3. For example, team 1 should name their file as AI_team1_ph3.zip.
5. No hard copies or soft copies results in 0 points.
6. Demonstrate your project with the Instructor on December 4 after the class.