Pattern recognition in time series data sets

Abstract

The time series data (TSD) is a key set of information expanding temporally or spatially. The TSD is available in all possible scientific, economic, or social systems, indicating the development/ evolution of important parameters along with fluctuation. The fluctuation in TSD is an indicator of some special event or process observed by the mentioned system. The fluctuations can be random or of some specific pattern or shape, and purely depend on the external agents influencing the TSD. The patterns may be shaped as some spikes, wave functions, polynomials, etc.

Due to the significance of such fluctuation, the study of such fluctuation is very much required. These studies include, first and foremost the identification of any pattern or random signature in the TSD. This is followed by the characterization of patterns. For example, the Cardiac data or the seismic data where the pattern will be random however the amplitude and the width are a function of some important process observed by the system.

The project is addressed to the identification of such pre-defined patterns for any given TSD. The identification is facilitated by a smart algorithm that should be fast and efficient enough to cater to a large data set.

Academic Project Requirements:

1) Required No. of student(s) for academic project: 1

2) Name of course with branch/discipline: B.E./B.Tech. Computer Engineering/IT/MCA

3) Academic Project duration:

(a) Total academic project duration: 9 Weeks
(b) Student's presence at IPR for academic project work: 3 Full working Days per week

Email to: pshishir@ipr.res.in[Guide's e-mail address] and
project_cs@ipr.res.in [Academic Project Coordinator's e-mail address]

Phone Number: 079 -2140 [Guide's phone number]