Spatial Data Analytics

Invited Faculty: Prof. Shashi Shekher, Department of Computer Science, University of Minnesota, Minneapolis, USA

A course proposed under the MHRD GIAN programme to be offered by the School of Computer and System Sciences, JNU

26th - 30th December 2016, JNU, New Delhi

Overview

Spatial data analytics is concerned with analysis of data describing geographic phenomena (e.g., climate) or instrumented physical environment (e.g., roads, building). It is important for societal applications in sustainable development, energy, mobility, public safety, public health, as well as emerging location-based services such as local advertisement and mobile commerce (e.g., Uber).

Objectives

This course introduces the fundamental ideas and research challenges underlying the emerging spatial data analytics systems for spatial database management, spatial data mining, and spatial network engines underlying location based services.

Teaching and Learning Methods

5 days x 3 hours (2 hours of lecture + 1 hour of tutorial) per day

Learning Modules

Module 1: Introduction

Module 2: Spatial Query Languages

Module 3: Spatial Networks and Location Based Services

Module 4: Spatial Data Mining

Module 5: Emerging Trends, Research Challenges

Registration and Fees

Prior registration is mandatory for ALL students as per the procedure provided on the GIAN web portal.

The participation fees for taking the course is as follows:
- **Ph.D./ M.Tech./M.Phil. Students: INR 1000/-**
- **Faculty: INR 2500/-**
- **Members of Government Research Organizations: INR 5000/-**
- **Members of Industry/Private Research Institution: INR 10,000/-**
- **Participants from abroad: US $500/-**

The above fee includes all instructional materials for tutorials and assignments, laboratory equipment usage charges

Invited Faculty

Prof. Shashi Shekhar is a McKnight Distinguished University Professor at the Department of Computer Science, University of Minnesota, Minneapolis, USA. He is a key difference-maker for the field of GIS by the most popular GIS textbook. He has a distinguished academic record that includes 300+ refereed papers, a popular textbook on Spatial Databases (Prentice Hall, 2003) and an authoritative Encyclopedia of GIS (Springer, 2008). He has also received the IEEE-CS Technical Achievement Award, and the UCGIS Education Award and was elected an IEEE Fellow as well as an AAAS Fellow. His recent research results played a critical role in evacuation route planning for homeland security and received multiple recognitions including the CTS Partnership Award for significant impact on transportation. Prof. Shashi Shekhar is serving as a co-Editor-in-Chief of Geo-Informatica, an International Journal on Advances in Computer Sciences for GIS (Springer), and a series editor for the Springer-Briefs on GIS. He has been member of the editorial committee of a number of ACM and IEEE journals in the area of GIS, Spatial informatics.

Host Faculties

Dr. Ayesha Choudhary, Assistant Professor, School of Computer and System Science, Jawaharlal Nehru University, New Delhi. Her current research interests are in data analytics, computer vision and machine learning.

Prof. Sonajharia Minz Professor, School of Computer and System Science, Jawaharlal Nehru University, New Delhi. Her current research interest are in spatial data analytics, GIS and machine learning.

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For Registration apply online at

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