Data Mining

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Contents

Objectives

- understand and explain the basic concepts of data mining
- understand formalized concepts and methods and be able to implement them in the form of algorithms
- sensibly select, adapt, and apply relevant methods
- become able to educate yourself

Related Fields

1. Statistics [paradigms, models]
2. Mathematics

3. Information Retrieval [methods, algorithms]
4. Knowledge Processing
5. Heuristic Search

6. Decision Support Systems [applications]
7. Business Intelligence
8. Web Technology

Literature

Data Mining:

- D. Hand, H. Mannila, P. Smyth.
  Principles of Data Mining
  Bradford, 2001.

- P.N. Tan, M. Steinbach, V. Kumar.
  Introduction to Data Mining
  1st edition, Addison Wesley, 2005.

- I.H. Witten, E. Frank.
  Data Mining: Practical Machine Learning Tools and Techniques
  3rd edition, Morgan Kaufmann, 2011.

Software

Programming:

- Eclipse Foundation, Inc., Canada.
  Eclipse SDK
  Version 4.5. www.eclipse.org/downloads

Statistics:

- R Development Core Team.
  R
  Version 3.x. www.r-project.org

- E. Jones, T. Oliphant, P. Peterson and others.
  SciPy
  Version 1.x. www.scipy.org

- J.W. Eaton.
  GNU Octave
  Version 5.x. www.gnu.org/software/octave