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