

Machine Learning 102 Workshop

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About Me

- ▶ Founder, RDataMining.com
- ▶ Adjunct Professor, University of Canberra
- ▶ IEEE Senior Member
- ▶ Founder and Manager of the RDataMining group on LinkedIn
- ▶ Organiser of the Canberra Data Scientists Meetup Group
- ▶ Steering Committee Member of the Australasian Data Mining Conference (AusDM)
- ▶ Program Committee Member of 60+ academic conferences
- ▶ Author/co-author of 60+ publications
- ▶ Author/editor of 3 books:
 - ▶ R and Data Mining: Examples and Case Studies
 - ▶ Data Mining Applications with R
 - ▶ Post-Mining of Association Rules: Techniques for Effective Knowledge Extraction

About You

- ▶ Name
- ▶ Interests
- ▶ Background
- ▶ Experience in R
- ▶ Experience in data mining and machine learning
- ▶ What do you expect from this workshop
- ▶ ...

Unsupervised Learning - I: Cluster Analysis

1. Basic Concepts
2. Partitioning Methods
 - 2.1 K-means
 - 2.2 K-medoids
3. Hierarchical Methods
 - 3.1 Diana
4. Density based Methods
 - 4.1 DBSCAN
5. Evaluation of Clustering
6. Applications with Real World Problems

Unsupervised Learning - II: Associations & Correlations

1. Basic Concepts
2. Frequent Itemset Mining Methods
 - 2.1 Apriori
 - 2.2 Improving the Efficiency of Apriori
 - 2.3 FP-Growth
 - 2.4 ECLAT: Frequent Pattern Mining with Vertical Data Format
3. Pattern Evaluation Methods
4. Applications with Real World Problems

Online Resources and Contact

Online Resources

- ▶ R and Data Mining: Examples and Case Studies
<http://www.rdatamining.com/docs/RDataMining-book.pdf>
- ▶ RDataMining Reference Card
<http://www.rdatamining.com/docs/RDataMining-reference-card.pdf>
- ▶ Free online courses and documents
<http://www.rdatamining.com/resources/>
- ▶ RDataMining Group on LinkedIn (20,000+ members)
<http://group.rdatamining.com>
- ▶ Twitter (2,500+ followers)
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Contact

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