

Module MCS 016

Machine Learning for Cyber-Security
& Artificial Intelligence

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PhD Electrical Engineering, 2002

Interests:

- High Performance Computing
- Parallel and Distributed Computing
- Machine Learning Applications

Topics

- Overview: IA, Machine Learning, BigData, Data Science, Applications
- Fundamental concepts
- Decision Trees
- Bayesian networks
- Neural Networks
- Data streams – stream mining
- Data mining and machine learning for cyber-security
- Tools
- Hybrid learning

Software requirements

- For hands on and practice, students are recommended to install Weka

https://waikato.github.io/weka-wiki/downloading_weka/

Weka is available for Windows, Linux, and MacOS operating systems.

Bibliography

- I. Witten, E. Frank, M.A. Hall, Data Mining: Practical Machine Learning Tools and Techniques. Morgan Kaufmann, 2017.
- Tom M. Mitchell, Machine Learning, MacGraw-Hill, 1997.
- Technical papers published in scientific journals, conference proceedings, and technical literature.