CompSci.367

The Practice of Artificial Intelligence

Assoc. Prof. Ian Watson

Introduction

- Email: *ian@cs.auckland.ac.nz*
- Office hours:
  - Tuesdays 1:00 to 3:00 pm

My background

- PhD. In knowledge-based systems
- Spent 5 years building rule-based and OO KBS
- Interested in machine learning and case-based reasoning
- Much more interested in applied AI than theory

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- Motivation:
  - To study the AI techniques and methods that are most widely used by commerce and industry in the deployment of intelligent systems

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- Syllabus
  - The history and development of KBS
  - Rule-based declarative programming (CLIPS)
  - Introduction to Machine Learning and data-mining
    - Neural Networks, Genetic Algorithms
  - Case-Based Reasoning
  - KBS development
    - Knowledge elicitation
    - Knowledge acquisition/modelling
    - Life-cycle & methodologies
  - Tools, techniques & applications

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- Lecturing Staff
  - Ian Watson – Expert Systems, Knowledge Engineering, CBR,.....
    - ian@cs.auckland.ac.nz
  - Daniel Bertinshaw – CLIPS (and everything else)
    - dber021@ec.auckland.ac.nz
  - Serguei Shorin – Neural Networks
    - scho097@ec.auckland.ac.nz

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- Assessment:
  - 3 programming assignment (10% each)
    - CLIPS assignment
    - Machine Learning assignment
    - Knowledge Engineering assignment
  - Midterm test (10%)
    - Wed 21st September 18:30-20:00
    - ? venue: TBA
  - Exam (60%)
    - ? venue: TBA

You must pass the theory & practical components!

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- Reading
  - Stuart J. Russell and Peter Norvig. Artificial Intelligence : A Modern Approach. Prentice Hall, Upper Saddle River, New Jersey, 1995. (this book is also used by 366, 765, 767 & is useful for 760)
  - Joseph C. Giarratano. Expert Systems : Principles and Programming. Brooks/Cole Pub. Co., 1998.
  - Applying Case-Based Reasoning: techniques for enterprise systems, Ian Watson. Morgan Kaufmann Inc. 1997

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- Reading:
  - ~1600 AI/KBS books in bookshops
  - www.amazon.com
    - Books > Subjects > Computers & Internet > Computer Science > Artificial Intelligence > Expert Systems