CompSci.367
The Practice of Artificial Intelligence

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Introduction

- Email: *ian@cs.auckland.ac.nz*
- Office hours:
  - Tuesdays 1:00 pm to 2:00 pm

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My background

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

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

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- Syllabus
  - The history of AI
  - Logic Programming (Prolog)
  - Knowledge Representation
  - Rule-based declarative programming (CLIPS)
  - Knowledge-Based Systems
  - Knowledge Elicitation
  - Introduction to Machine Learning and data-mining
    - Neural Networks, Genetic Algorithms
  - Search
  - Heuristic Search (A*)
  - Planning

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- Lecturing Staff
  - Ian Watson *ian@cs.auckland.ac.nz*
  - Mike Barley *barley@cs.auckland.ac.nz*
  - Pat Riddle *pat@cs.auckland.ac.nz*
- Tutor
  - Carl Schultz *csch050@aucklanduni.ac.nz*
- Marker
  - Stefan Wender *swen011@aucklanduni.ac.nz*

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- Assessment:
  - 3 programming assignment (10% each)
    - KBS/CLIPS assignment
    - Machine Learning assignment
    - Planning/Prolog assignment
  - Midterm test (10%)
    - Time & venue TBA
  - Exam (60%)
    - 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 grad AI courses)
  - Joseph C. Giarratano. Expert Systems : Principles and Programming. Brooks/Cole Pub. Co., 1998.

  - **Note:** there are numerous similar (and good) AI books in the library that cover this course.

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- Reading:
  - ~1600 AI/KBS books in bookshops
  - www.amazon.com
    - Books > Subjects > Computers & Internet > Computer Science > Artificial Intelligence > Expert Systems
  - American Association for the Advancement of Artificial Intelligence (AAAI)
    - www.aaai.org/AITopics/pmwiki/pmwiki.php/AITopics/HomePage
    - (excellent introduction to AI topics with video clips you can browse)

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- Resources
  - The 367 website has a lot of useful AI resources including software
    - www.cs.auckland.ac.nz/compsci367s2c/resources/index.html

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