

CompSci.367
The Practice of Artificial Intelligence

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Introduction

- Email: ian@cs.auckland.ac.nz
- Office hours:
 - Wednesdays 12:00 pm to 1:00 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
 - Jonathan Rubin jrubin01@gmail.com
- Marker
 - tba

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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/compsci367s1c/resources/index.html
