



# COMP250: Artificial Intelligence **1: Introduction to AI**

# Proposal

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  - ▶ How will you address the architect and research requirement?

# AI in games



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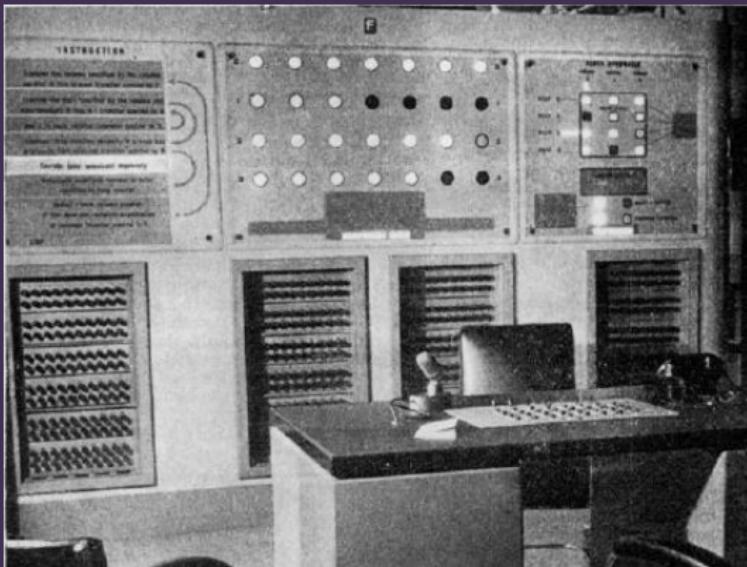
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- ▶ Performing tasks by machine (or by software) which would ordinarily require human intelligence
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- ▶ In games, AI systems break down roughly into two categories:
  - ▶ Authored behaviours: AI follows (often sophisticated) rules set out by a designer
  - ▶ Computational intelligence: AI behaviour emerges from an algorithmic system

## Nimrod (Ferranti, 1951)



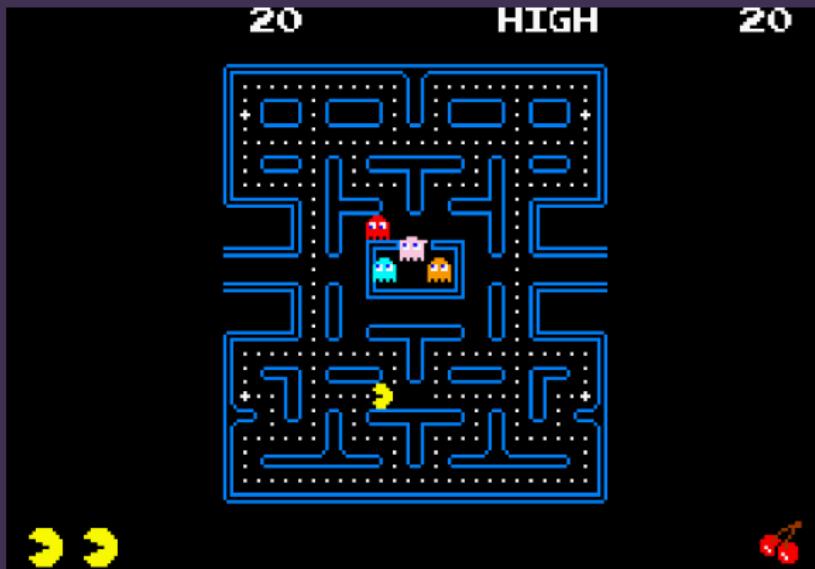
# Samuel's Checkers program (IBM, 1962)



# Galaxian (Namco, 1979)



# Pac-Man (Namco, 1980)



# Deep Blue (IBM, 1997)



# Half-Life (Valve, 1998)



# The Sims (Maxis, 2000)



# Black & White (Lionhead, 2001)



# Façade (Mateas & Stern, 2005)



# Chinook (Schaeffer et al, 2007)



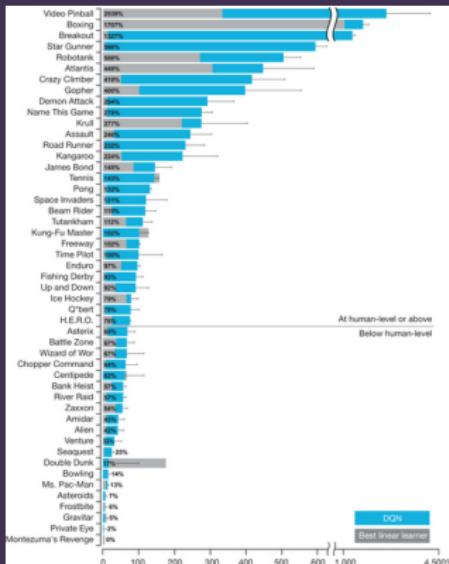
# Left 4 Dead (Valve, 2008)



# Watson (IBM, 2011)



# Deep learning for Atari games (DeepMind, 2013)



# AlphaGo (Google DeepMind, 2016)



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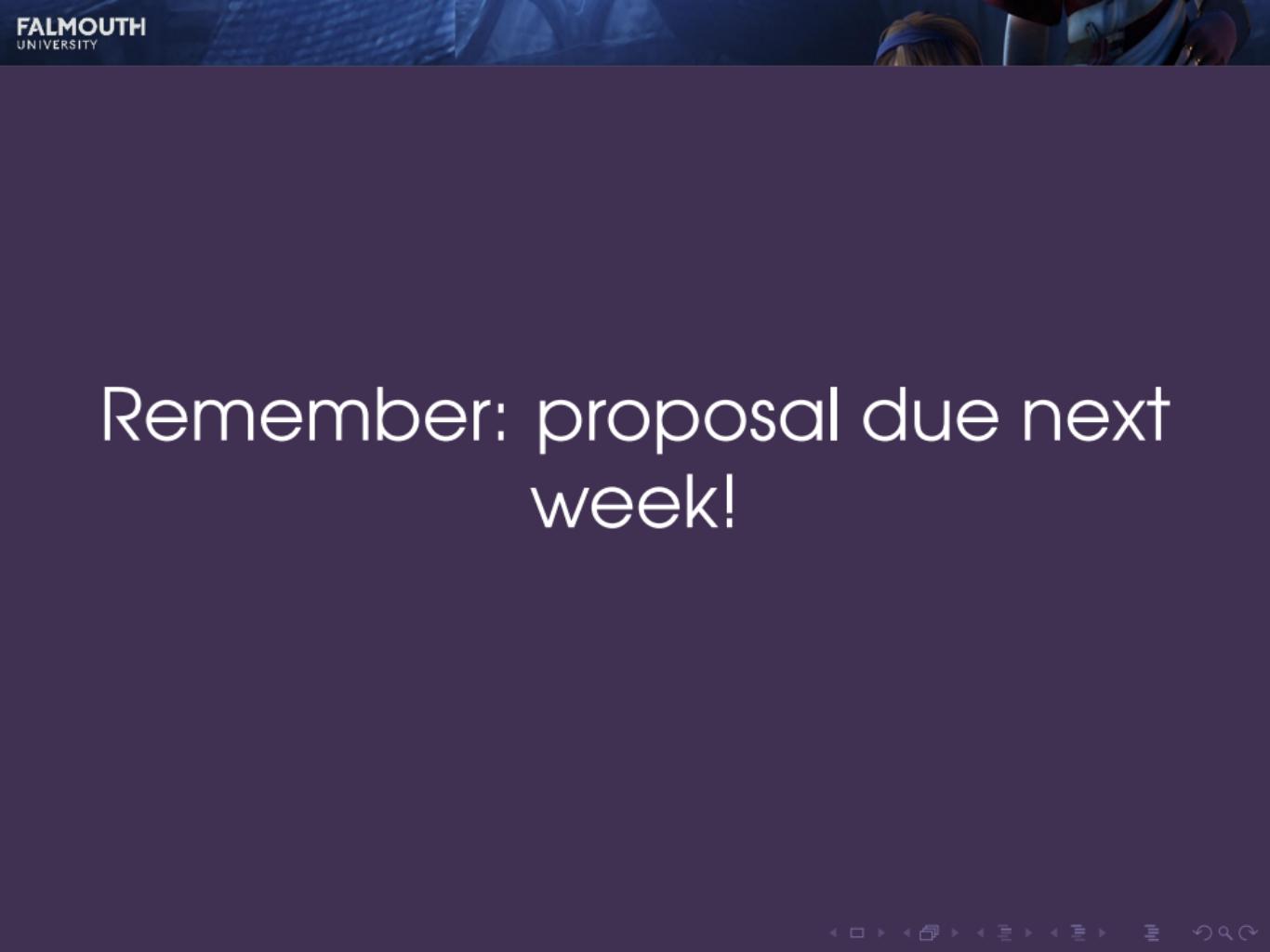
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- ▶ Artificial neural networks



Remember: proposal due next week!