Does this road lead to AGI? My journey so far…
1983 Dick Smith VZ200
1992-1995  BCMS in Mathematics, Waikato University
1996  MSc in Mathematics, Auckland University
2000-2001 Dot-com crash
“Intelligence is the ability to learn to perform well over a wide range of environments”
2009-2010  Gatsby Unit, University College London
INTERESTING THINGS WERE HAPPENING

1. Progress in machine learning
2. Progress in neuroscience
3. Rapid progress in computer hardware
4. Can define and measure machine intelligence
DeepMind

Building the world’s first Artificial General Intelligence

Confidential Draft
DO NOT DISTRIBUTE

FINAL - 24th September 2010
COMPUTER PERFORMANCE: 1990 TO 2017

2 million calculations per second
1/4 million years to train vision system

180 trillion calculations per second
1 day to train vision system
ATARI 2600 GAMES
ATARI 2600 GAMES

Hundreds of games, lots of diversity

We didn’t make the games

Hard but not too hard

Agent interface @ 60 Hz:

— input 30k colour pixels

— reward signal is the change in score

— output is fire button + 9 directions
The Game of Go

- Over 5000 years old
- Most played board game in the world
- Very simple rules
- Extremely deep game play
- Long standing Grand Challenge for AI
AlphaGo Wins 4-1 in Seoul
At last — a computer program that can beat a champion Go player

ALL SYSTEMS GO
Mean Opinion Score

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<th>Concatenitive</th>
<th>WaveNet Human Speech</th>
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Locomotion
Simple Grounded Language in a 3D World

pick the magenta object in the green room
There is a sphere with the same size as the metal cube; is it made of the same material as the small red sphere?
DeepMind Today

• About 700 people… and still growing!
• Hundreds of research publications per year
• 4 in Nature, 2 in Science… and more coming :-)
• Probably the world’s leading AGI research centre
THINGS I’VE LEARNT

• Location
• Management
• Vision
• Timing