FORGET ABOUT THE TERMINATOR ALREADY

AI EDUCATION FOR ALL

Teemu Roos
WHY DO WE THINK AI = TERMINATOR?

THREE REASONS

1. Science fiction
2. “Uncanny valley” (i.e., psychological aversion to almost but not quite humanlike forms)
3. Click-bait media
4. Fear of the unknown
1. **Societal cost**: Fear of AI slows down the adoption of AI solutions
2. **Scientific cost**: Without research funding, no world-class science
3. **Industrial cost**: No world-class science, no innovations
HOW WE CAN CHANGE THIS

• Experts should reach out more to the public about their work
• Journalists should dump their click-bait headlines
• We should all be more critical about what we read and see
• Most importantly: We need AI education on all levels, free for all
LESSON 1: WHY THE TERMINATOR WILL NOT COME

• **Exponential is not enough**: Exponential progress (speed) is trumped by exponential increase in problem hardness
  
  • Think of the self-improving system: yourself!

• **Narrow AI**: Even though computers beat humans in certain tasks (arithmetics, chess, Go, ...), they are very stupid in many other ways
  
  • There is no “brain-in-a-jar” AI that learns new skills: it’s always a different system.
1. University education: already strong and growing
   • e.g., AI in Games, 2 x Deep Learning, Philosophy of AI, AI and the Law, Data Science
2. Professional training: AI Diploma training starting in Fall 2018
   • both technical and non-technical (“CEO”) tracks, 12 days
   • plus: separate events, e.g., “AI:n perusteet” (in Finnish) March 8-9, 2018
   • internships (academia ↔ industry), thesis supervision, hackathons
3. Schools
   • teacher education, curriculum reforms
4. Open education for all
   • Open Universities (University of Helsinki & Aalto), e.g., AI course starts Jan 4th, 2018
   • MOOCs
PART I: ELEMENTS OF AI

• Starting in May 2018
• three weeks, 2 credit units
  • philosophy and history of AI
  • basic concepts: search and planning, games, machine learning, neural networks, signal processing, robotics
  • “AI literacy”
• no programming or maths skills required
• free of charge
PART II: AI PROGRAMMING

• Starting in Winter 2018-2019
• 3 credit units
  • theory and practice
  • same themes as in *Elements of AI*
  • path to becoming an AI developer
• programming (Java or python) and maths required
• goal: worlds’s best AI MOOCs
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