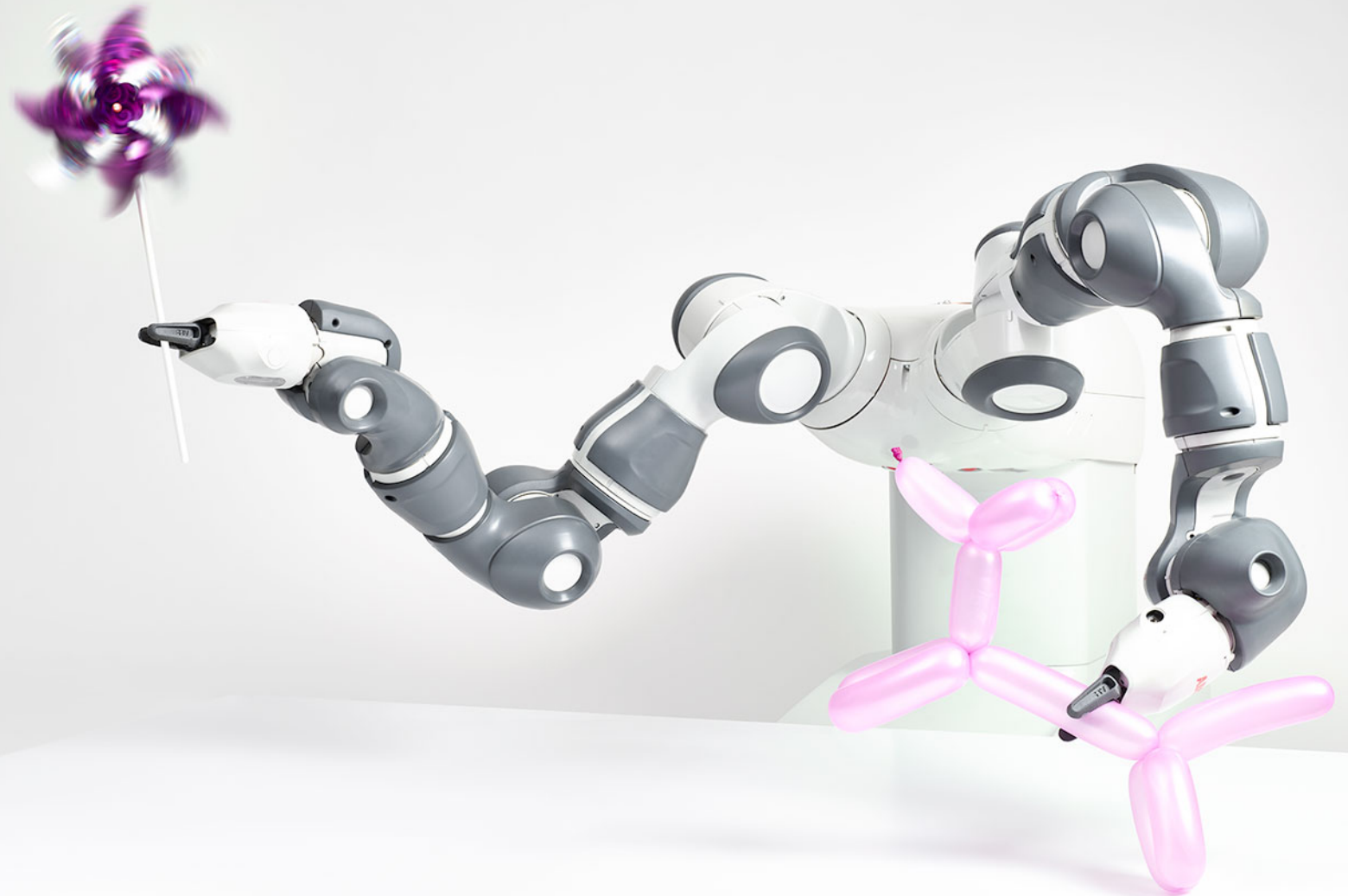




AI in Startups

Dr Stelios Kapetanakis
University of Brighton, UK



Speaker

- ▶ Dr Stelios Kapetanakis
- ▶ Director of the Knowledge Engineering Group, CEM, Brighton
- ▶ Head of Research and Development for Gluru, Ltd.
- ▶ Member of the British Specialist Group in Artificial Intelligence

Disclaimer

“Any views you hear today are related solely to the presenter and they don't represent in any way the University of Brighton, Gluru Ltd. or any other organisation the presenter has worked for or collaborated with in the past”

AI and Startups

- ▶ Artificial Intelligence
- ▶ Startups
- ▶ Startups and Universities

AI is around us: We live in An AI world



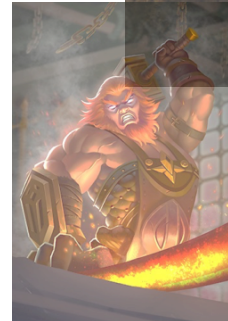
AI? Is around us?: We live in An AI? World?



What is AI?

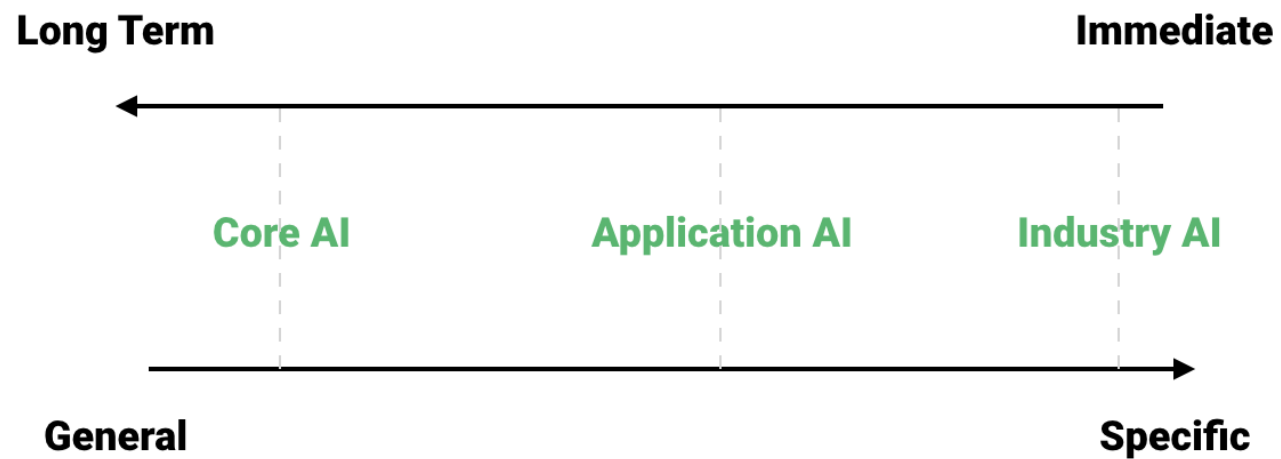
“An ancient wish to forge the gods”

- ▶ 1956: AI Start
- ▶ 1973: The Fall – AI Winter I –
- ▶ 1980: Rise in Japan
- ▶ 1987: - AI Winter II –
- ▶ 1993 – 2011 – The Victory of the neats
- ▶ 2011 - ?



AI Technology

“The AI Spectrum”



AI Technology

▶ Core Tech

- ▶ AI
- ▶ Deep Learning
- ▶ Machine Learning
- ▶ NLP Platforms
- ▶ Predictive APIs
- ▶ Image Recognition
- ▶ Speech Recognition

▶ Rethinking Enterprise

- ▶ Sales
- ▶ Security
- ▶ Fraud Detection
- ▶ HR/Recruiting
- ▶ Marketing
- ▶ Personal Assistant
- ▶ Intelligence Tools

▶ Rethinking Industries

- ▶ AdTech
- ▶ Agriculture
- ▶ Education
- ▶ Finance
- ▶ Legal
- ▶ Manufacturing
- ▶ Medical
- ▶ Oil/Gas
- ▶ Media/Content
- ▶ Consumer Finance
- ▶ Philanthropies
- ▶ Automotive
- ▶ Diagnostics
- ▶ Retail

▶ Rethinking Humans/HCI

- ▶ Augmented Reality
- ▶ Gestural Computing
- ▶ Robotics
- ▶ Emotional Recognition

▶ Supporting Technologies

- ▶ Hardware
- ▶ Data Preparation
- ▶ Data Collection

AI Technology - Shares

- ▶ Autonomous robots: 31% (3,582 – 13,927)
 - ▶ *(including self-driving vehicles)*
- ▶ Digital assistants: 30% (2,175 – 8,075)
 - ▶ *(e.g., Siri, automated online assistants)*
- ▶ Neurocomputers: 22% (1,590 – 4,685)
- ▶ Embedded systems: 19% (877 – 2,095)
 - ▶ *(machine monitoring and control systems)*
- ▶ Expert systems: 12% (7,055 – 12,433)
 - ▶ *(e.g., medical decision support systems, smart grid)*
- ▶ Others: 5%

Numbers are in million \$

AI and startups

“I think it's tempting for every entrepreneur to package his or her company as an AI company, and it's tempting for every VC to want to say ‘I'm an AI investor.’”

“The startups that made up a story that isn't fulfillable, and fooled VCs into investing because they don't know better.”

Dr. Kai-Fu Lee

Startup spectrum – What is a startup?

“A startup is a company working to solve a problem where the solution is not obvious and success is not guaranteed”

Neil Blumenthal, cofounder and co-CEO of Warby Parker.

“Startup is a state of mind”

Adora Cheung, cofounder and CEO of Homejoy



100 STARTUPS USING ARTIFICIAL INTELLIGENCE TO TRANSFORM INDUSTRIES

CONVERSATIONAL AI/ BOTS



VISION



AUTO



ROBOTICS



CYBERSECURITY



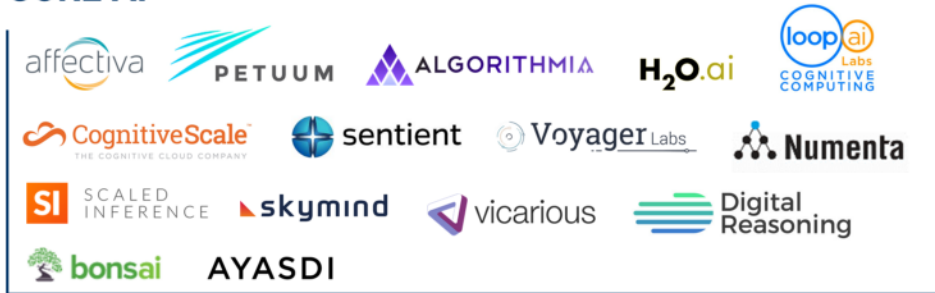
BUSINESS INTELLIGENCE & ANALYTICS



AD, SALES, CRM



CORE AI



HEALTHCARE



FINTECH & INSURANCE



OTHER



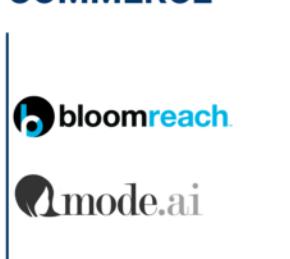
TEXT ANALYSIS/ GENERATION



IOT/IIOT



COMMERCE



Startup Spectrum – past years

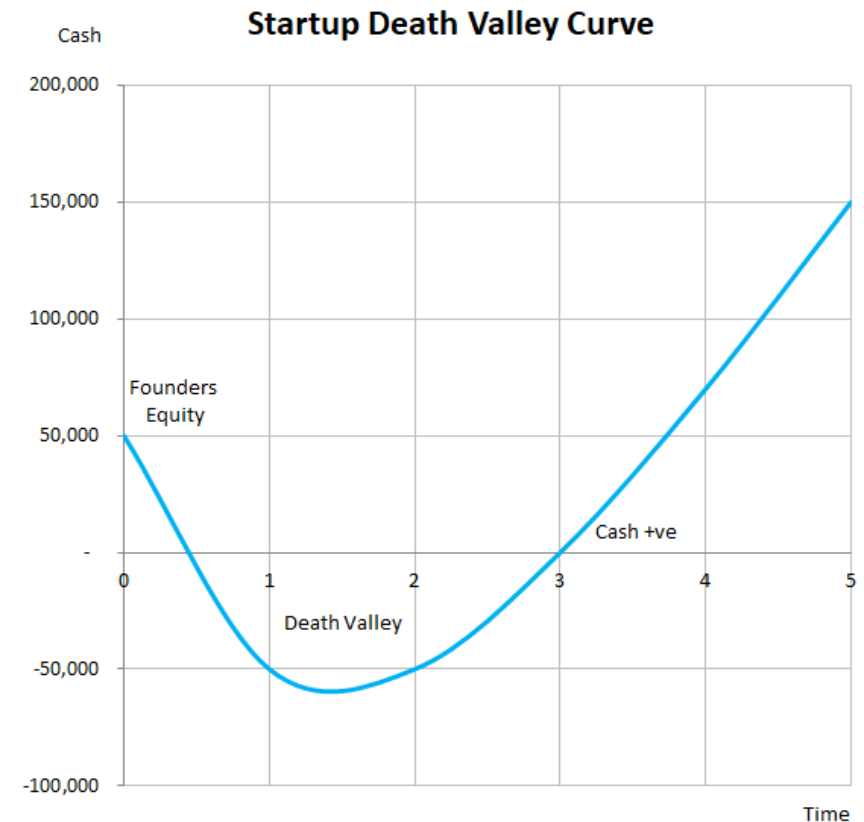
- ▶ Vicarious, 2013
- ▶ Watson, Deepmind, 2014
- ▶ 6sense, Botanic.io, Arria, Automation Insights, Banjo, ID Avatars, Infer, MindMeld, Mintigo, Presado, Skytree, Sense.ly, X.ai, Viv Labs, 2015
- ▶ Magic Pony, Blackbird Technologies, Appier, 2016
- ▶ SenseTime, Flatiron Health, Directly, Element AI, H2O, UiPath, Pony.ai, C3 IoT, Banjo, Tempus Labs, Stem, InsideSales.com, Dataminr, HyperScience, Vivint, Anki, CloudMinds, Ayasi, iCarbonX, CrowdStrike, Cylance, Tetra, Nuro, SoundHound, 2018

Gluru Spectrum



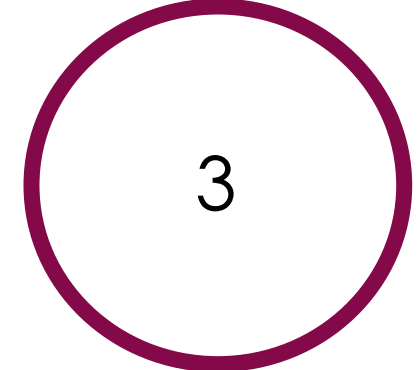
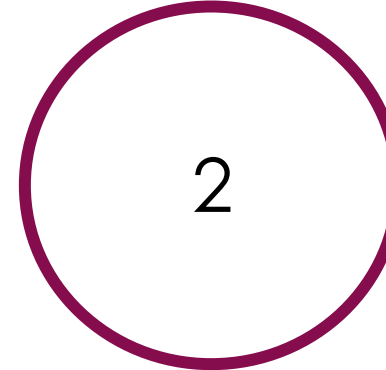
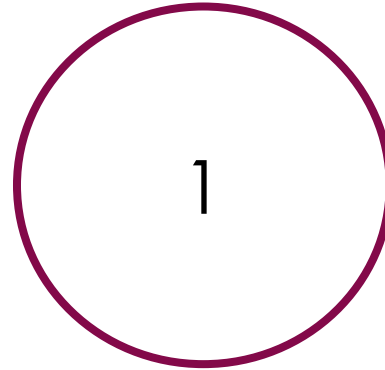
How startups work

- ▶ The Startup Mentality
 - ▶ Top layer
 - ▶ Middle layer
 - ▶ Back end
- ▶ Figures
- ▶ Rewards
 - ▶ Free.. Coffee
 - ▶ Work from home
 - ▶ Cart Racing



Startup Goals and Promises

- ▶ MVP
- ▶ Private Beta Launch
- ▶ Key Hire
- ▶ Redesign – Iteration
- ▶ Public Beta
- ▶ Major Milestone
- ▶ First investment round



Startup Selling Patterns

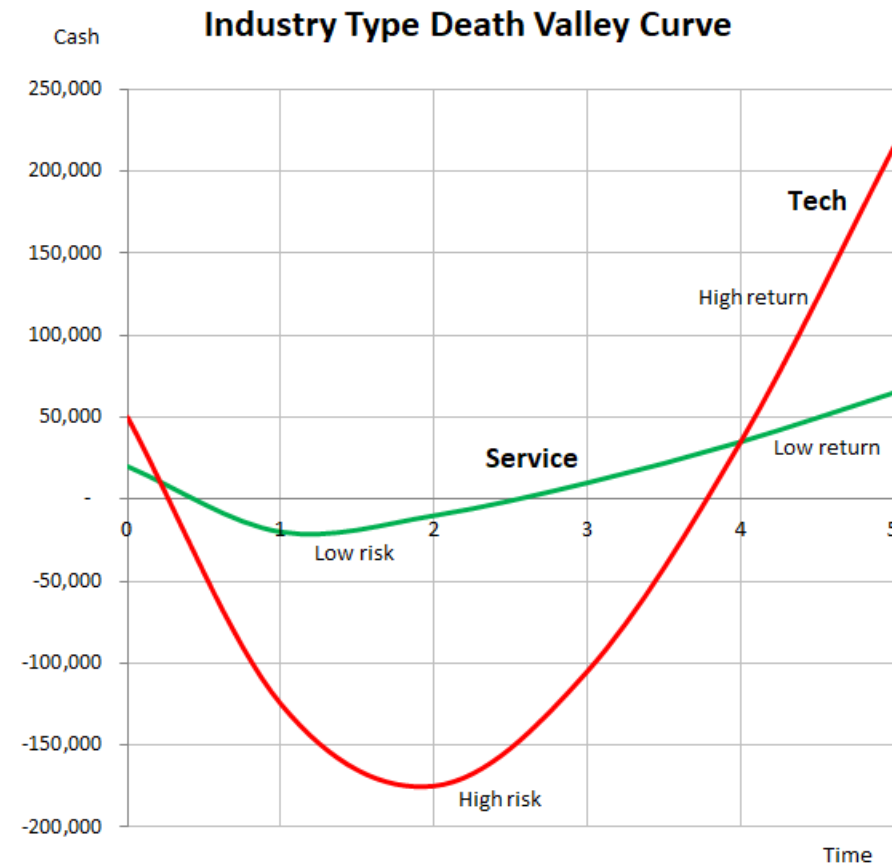
- ▶ Identify your buyer
 - ▶ Having a good business idea
 - ▶ Communicate it
 - ▶ Understand your market
- ▶ Problem Solving
 - ▶ Have the right people
 - ▶ Get the right finding
 - ▶ Adapt
- ▶ Real world use cases

Iterations and Internal Dev Cycles

- ▶ The Lean startup
- ▶ The perfect business plan..
 - ▶ Does not exist....

Crossing the Valley of Death

- ▶ Growth patterns
- ▶ Funding stagnation hits



Achievers vs. Tricksters

- ▶ Startups are selling AI
 - ▶ A few have a good idea
 - ▶ Fewer can succeed with what they have promised to achieve..
- ▶ At the moment we have more than 3500 AI startups in the world(!)
- ▶ How many they will be next year?



The other side

- ▶ Be unique
- ▶ Be the 1st
- ▶ Reuse



- ▶ No...
 - ▶ SELL
- ▶ Buy the 1st
 - ▶ SELL
- ▶Run
 - ▶ SELL

Companies vs. Universities

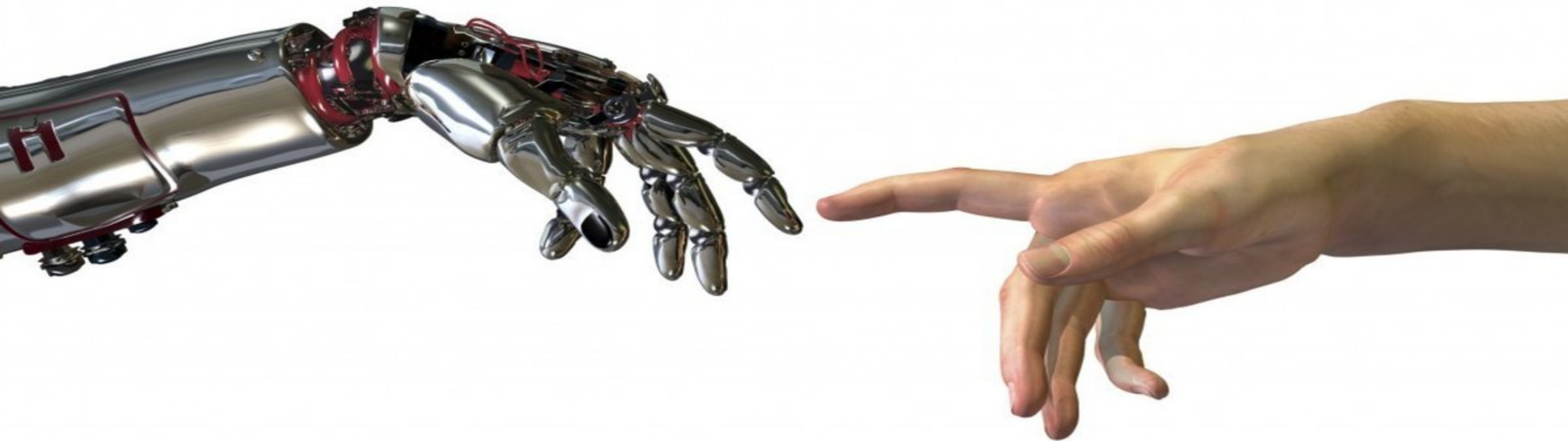
- ▶ Universities do the work and companies make profit, hire talent and take the credit
- ▶ Top AI researchers in universities are poached by Silicon Valley firms
- ▶ Train the next generation

Observations

- ▶ At the moment 75% of the AI talent works for.. Companies type Google
- ▶ Neural Information Processing Systems sells within 11 minutes and 38 seconds...
- ▶ Blurring line between public & private sectors

Vision for the future

- ▶ KTPS and KTNs are a first step support collaboration
- ▶ Good projects should be driven by universities
- ▶ Startups and Universities should work hand by hand
- ▶ State role in funding high risk long term research
- ▶ National AI...



THE END