

AI and Human Safety

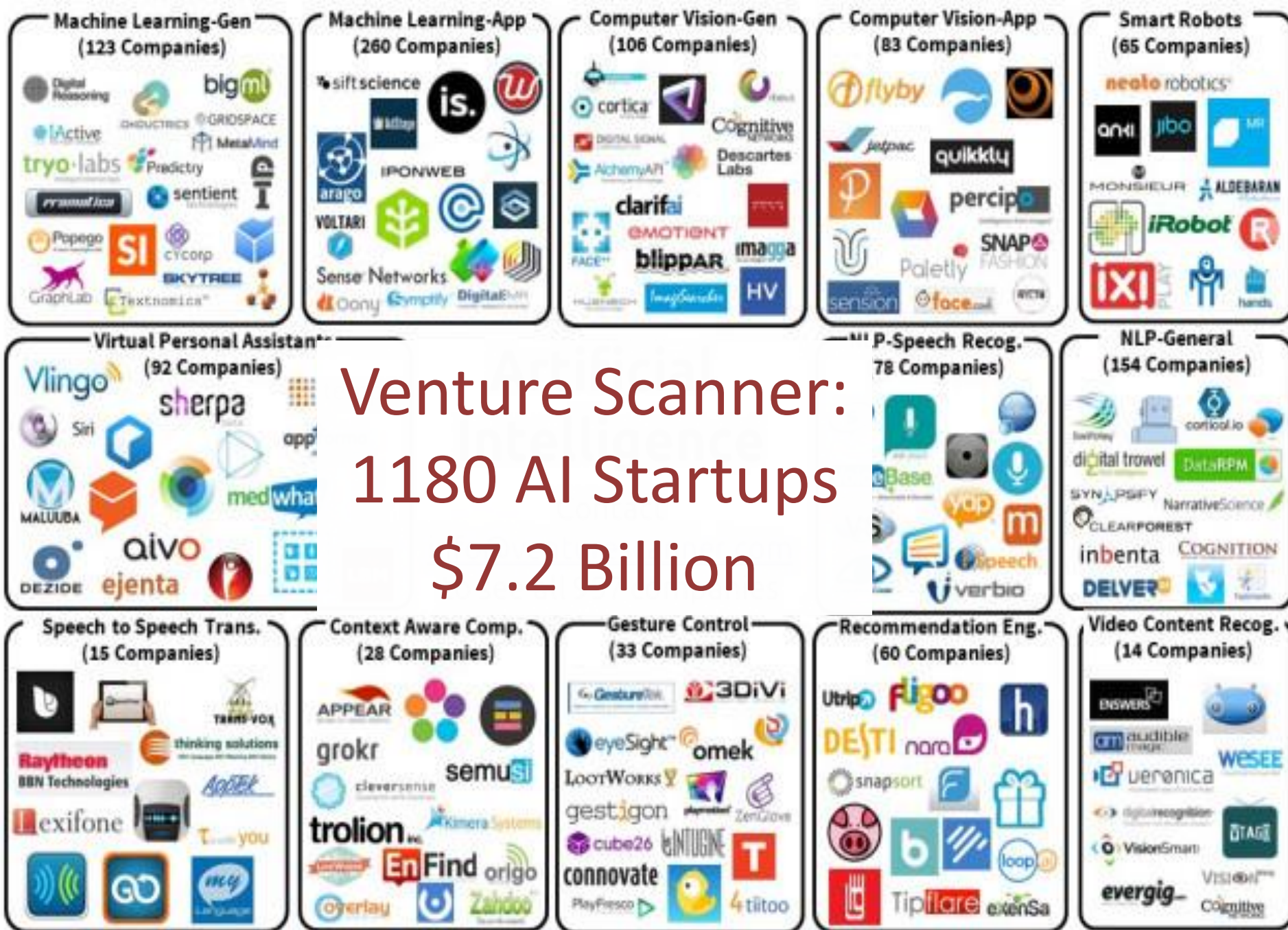
Steve Omohundro, Ph.D.
PossibilityResearch.com
SteveOmohundro.com
SelfAwareSystems.com

McKinsey: AI and Robotics over 10 years

\$50 Trillion!

Knowledge Work: \$25T
Internet of Things: \$15T
Advanced Robotics: \$8T
Autonomous Vehicles: \$1T
3D Printing: \$1T

US GDP is \$18 Trillion



Venture Scanner:
1180 AI Startups
\$7.2 Billion

A mall security robot has knocked down and run over a toddler in Silicon Valley

Breaking Asimov's first law.

JOSH HRALA 15 JUL 2016



<http://www.sciencealert.com/a-mall-security-robot-recently-knocked-down-and-ran-over-a-toddler-in-silicon-valley>

7 Tesla Autopilot Accidents

April 26-August 2, 2016



CarNewsChina.com

This Is The Robot Dallas Police Used To Kill Shooting Suspect

Major ethical questions remain.

🕒 07/11/2016 12:53 pm ET | Updated Jul 11, 2016



New Techniques Needed!

- Serial Systems - Bugs
- Distributed Systems – Deadlocks, Races
- Secure Systems – Outside Attackers
- Intelligent Systems – Inside Attackers
- Governed Systems – Illegal Actions

2008: Cryptocurrencies

- Bitcoin and 699 Altcoins
- Decentralized consensus
- “Blockchain” ledger prevents double spending
- “Bitcoin miners” get paid for adding blocks
- “Proof of work” prevents “Sybil” attacks
- Current market cap: \$9B



2015: Smart Contracts

- Ethereum launched
- “Blockchain with a built-in programming language”
- “Consensus-based globally executed virtual machine”
- Contracts in Turing complete programming language EVM
- Summer 2014 presold more than \$18 million, now \$1B



2016: The DAO

- “Decentralized Autonomous Organization”
- “The Code is the Contract”
- Crowdsourced VC
- Launched: April 30, 2016
- Raised more than \$150M
- Hacked: June 17, 2016
- \$54M Ether stolen
- Ethereum forked into ETC, ETH



AI and Human Safety

- The future is bright!
- Need governance!
- Need new ideas!
- Need new methods!
- Need AI startups!

