

Robotics

Industrial Robotics

Drones

Social Robotics*

Announcements

- 495 Students

Industrial



Industrial

- Very expensive, very precise
- One robot, one job
- Industry is mature, but growing rapidly

Drones



Drones

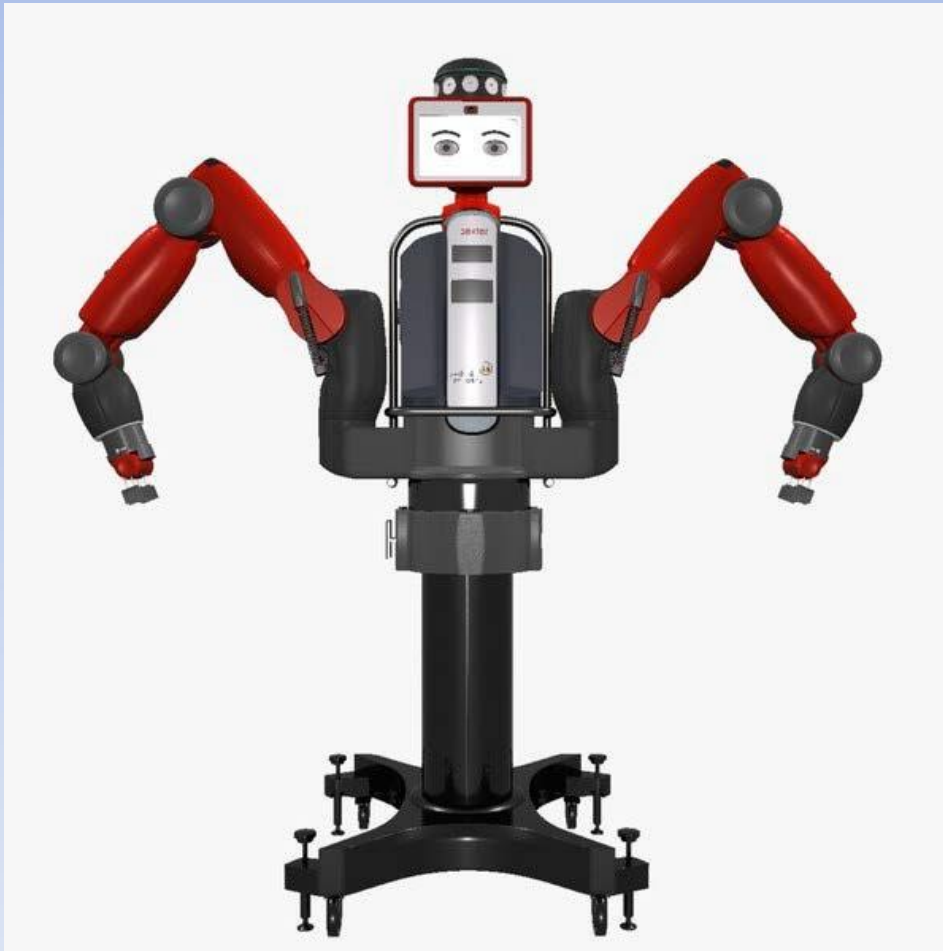
- Industry is still in infancy
- Are they really robots??
- CES growth

Crazy Humans



Hybrids (Baxter \$35,000)

<https://www.rethinkrobotics.com/sawyer>



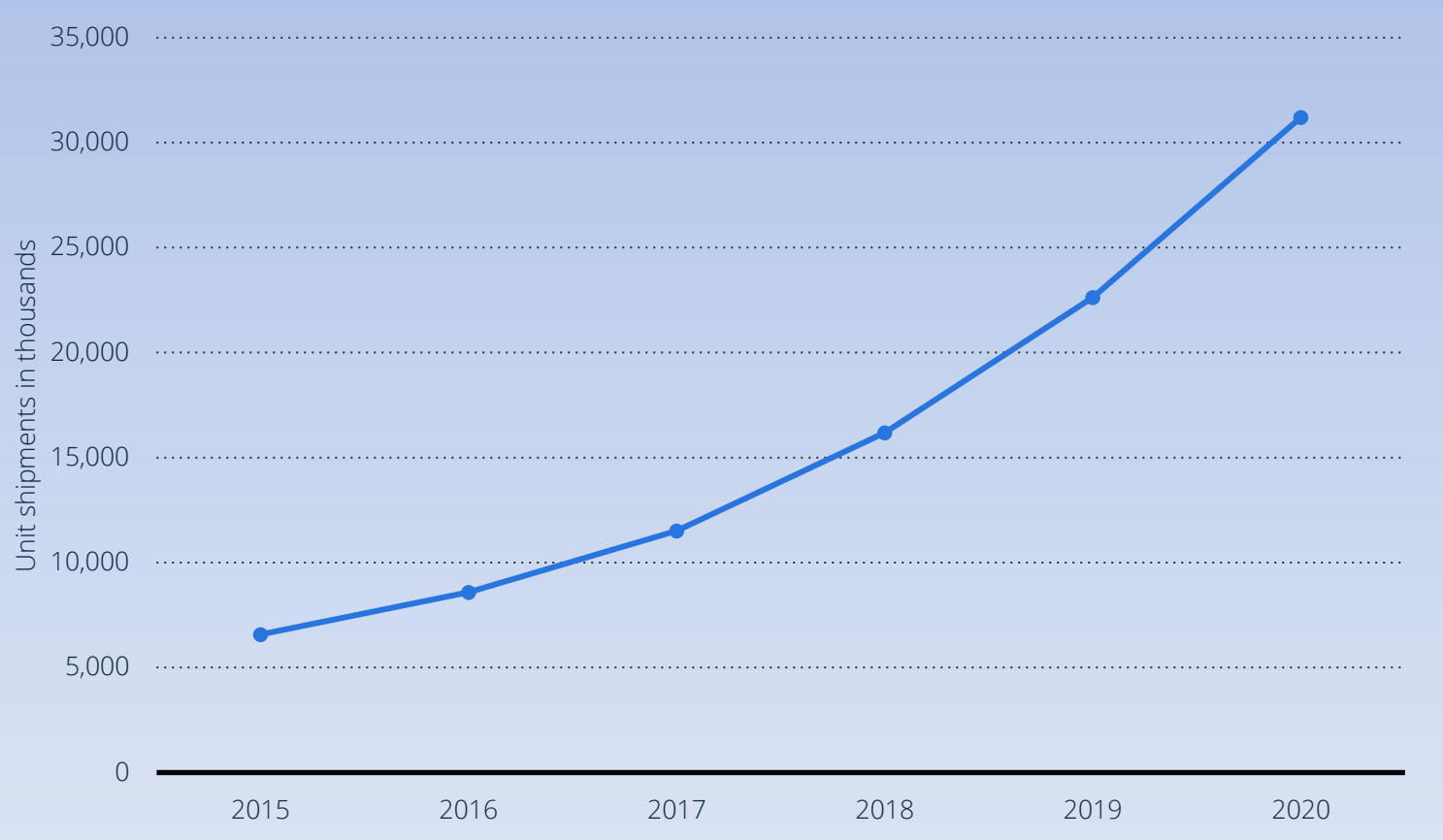
Social Robots

- A **social robot** is an autonomous **robot** that interacts and communicates with humans or other autonomous physical agents by following **social** behaviors and rules attached to its role.

Growth

Global unit shipments of consumer market robots (household, toy & educational) from 2015 to 2020 (in 1,000s)*

Consumer robotics shipments worldwide 2015-2020



Issues



Examples



Robots CES 2022

<https://www.youtube.com/watch?v=xppMgm2buuM>

2020 NYC Big Show

I'll show a photo Album.....fun.

Boston Dynamics

https://www.youtube.com/watch?v=5iV_hB08Uns&t=21s

This will be your final project.....

<https://www.youtube.com/watch?v=tF4DML7FIWk>

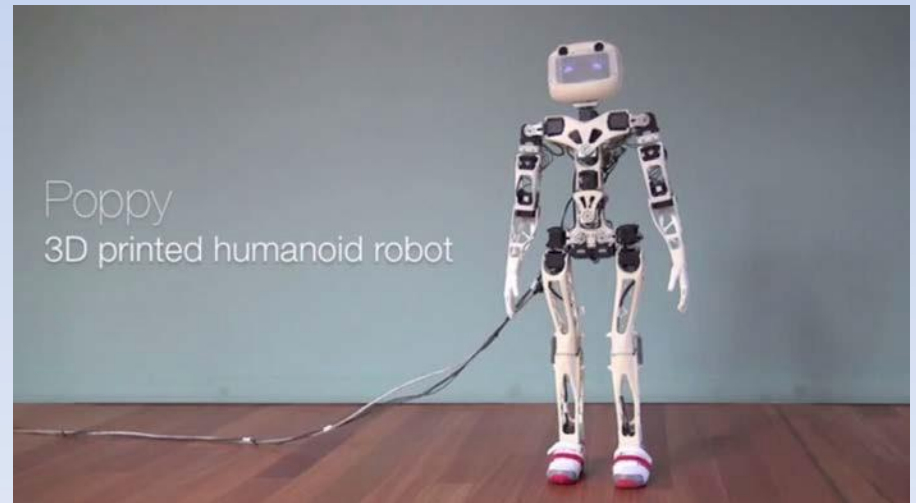
That might be a bit much.

OK, this does have final project written all over it.....

https://www.youtube.com/watch?v=XnZH4izf_rl

Poppy

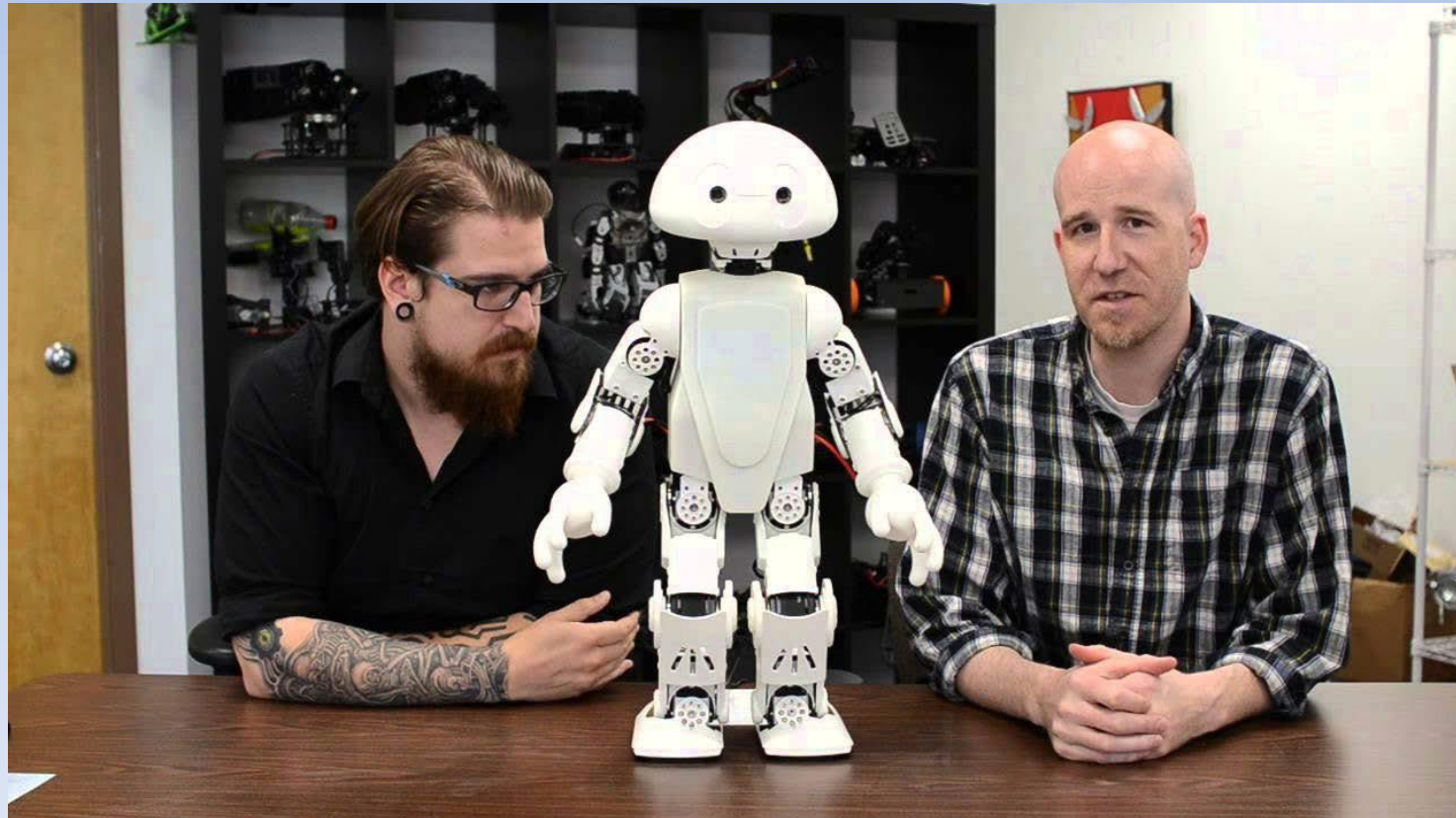
<https://www.youtube.com/watch?v=IXLZu5ree2Y>



Jimmy

21st Century Robot??

<https://www.21stcenturyrobot.com/about-jimmy>



Buddy (Kickstarter)

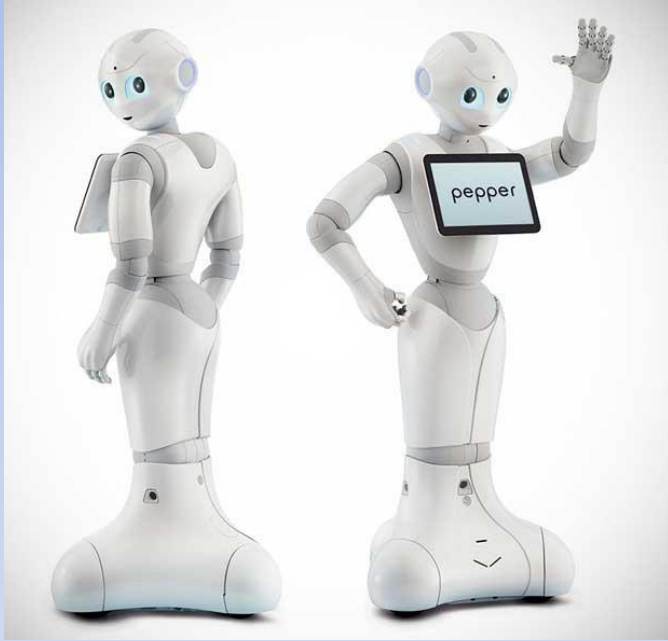
<https://www.indiegogo.com/projects/buddy-your-family-s-companion-robot#/updates/all>



NAO (Aldebaran)



Pepper (Softbank)



Top 2020 Robots....Half were on list in 2019,2017.....They didn't update the list.....

- Social Robots:
 - Aismo – been on the list for twenty years (2017)
 - Pepper
 - NAO (8 in inventory)
 - Romeo
 - Walker – new one <https://www.youtube.com/watch?v=4ZL3LgdKNbw>
 - Samsung retail bot – new
 - <https://www.youtube.com/watch?v=gAJKdEOpxNM>
- Non-Humanoid Social
 - TangoBots fall into this category
 - Buddy
 - Others
- Industrial
 - Boston Dymanics (DARPA)

Minions



Things minions can do

- Security
- Baby Watching
- Vacuuming
- Lawnmower
- Folding Laundry
- Window Cleaning
- Pool, gutters, lots of other cleaning
- Etc. etc.

Multi-Purpose Robots

- ????????

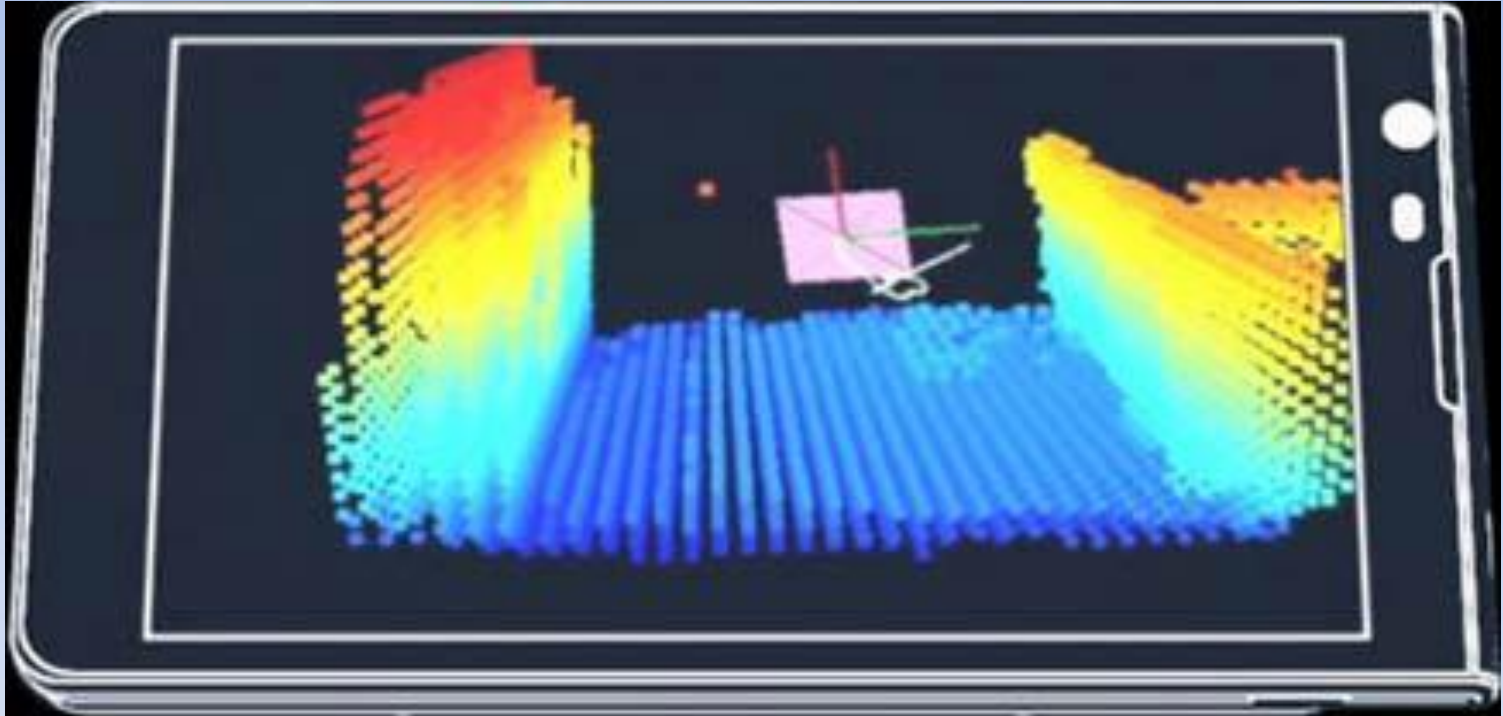
Jibo -The original Home or Alexis GONE (job offer)



Social Robots

- Mobile (safely travel)
- Localization (Know where it is)
- Speech (talk)
- Understanding (Speech Recognition)
- Cute, fun
- Versatile (Minion tasks)
- Vision (Recognition)

Tango



Watson

