Robotics

Recent Advances Make New Things Possible

- Arrival's autonomous mobile robots are a key lynchpin in the micro factory

- Need to be smart enough to navigate without help, flexible enough to deal with different environments and tasks

- Arrival has not proven its model yet

- Exciting space to watch

Takeaways
Design / NPD / Manufacturing

1. AI impacts on design

    i. Easier, more intuitive design through **natural interfaces**: language, sketching, style transfer

    ii. More people can be designers through **no/low code** products

    iii. Reinforcement learning → **machines iterate so you don't have to**

2. AI impacts on NPD

    i. New **representations** allow us to do math on styles (e.g., averaging two styles)

    ii. Computers will **not filter ideas** because of social or cultural pressure

    iii. Computers diligently **explore many possibilities** (drug discovery while you sleep)

3. AI impacts on manufacturing

    i. Better simulation means we can **try ideas before building** prototypes

    ii. **Generative design** can "evolve" parts, **3D printing** can make them real

    iii. AI makes **better robots**, which in turn allows **new business models**