Introduction to Computer Science

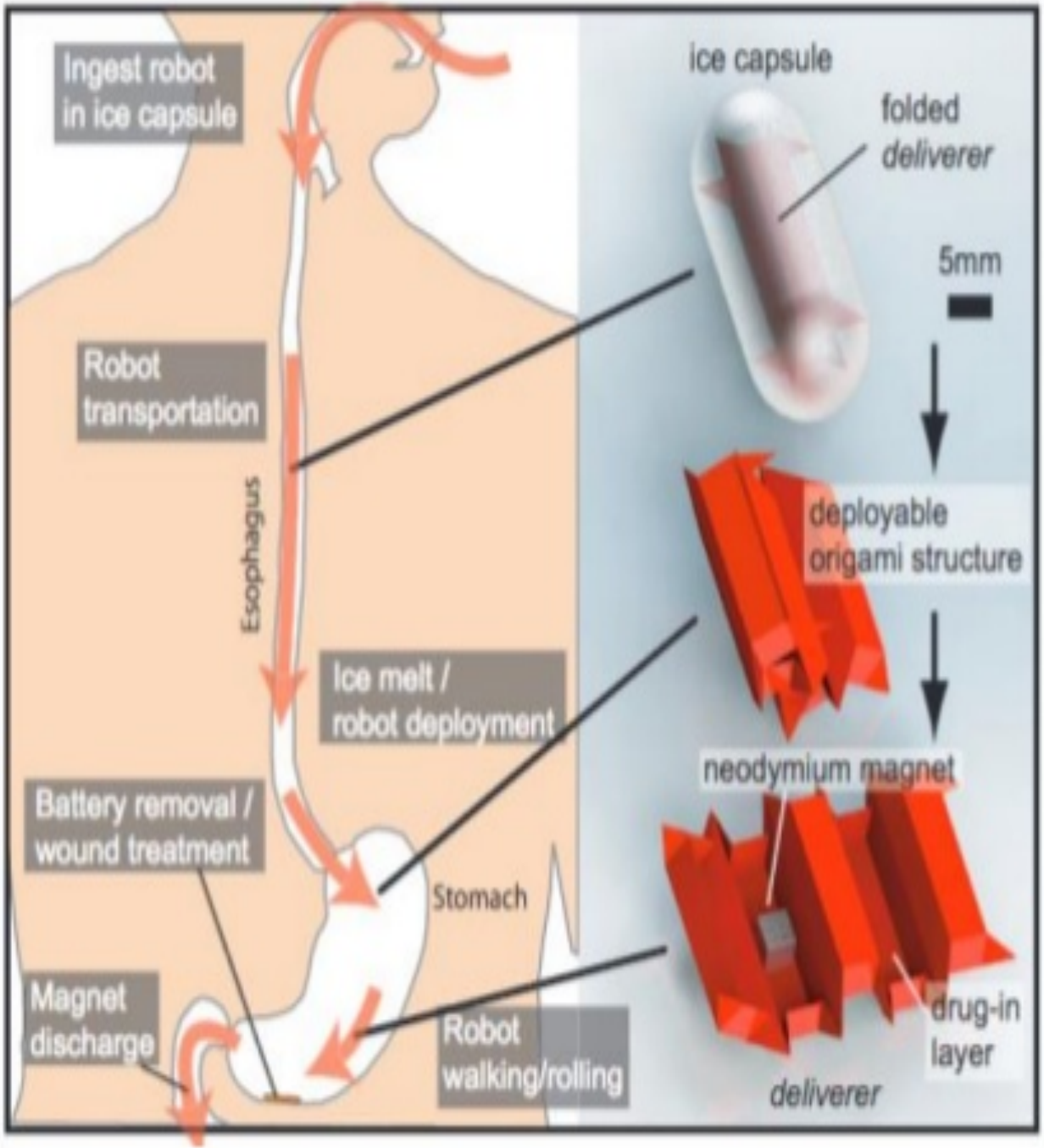
Lecture 2

BREAKTHROUGH FUTURE TECHNOLOGIES

Ingestible Robots

2024

Ingestible Robots



Smart Clothing
2026

Smart Clothing

- Smart clothing is still to go mainstream after first popping to the surface in 2015.
- Electronic textiles, also known as smart garments, smart clothing, smart textiles, or smart fabrics, are fabrics that enable digital components such as a battery and a light (including small computers), and electronics to be embedded in them.
- Smart textiles can be broken into two different categories: aesthetic and performance enhancing.
- Aesthetic examples include fabrics that light up and fabrics that can change color.
- Performance enhancing smart textiles are intended for use in athletic, extreme sports and military applications.

The Next Evolution of A.I.
2036
Big data analytics and predictive AI come of age-from weather, to elections, to geopolitics, evolution, and much else, the future has become almost disappointingly predictable.

Computer Science

- The scope of computer science contains mathematics, engineering, psychology, biology, business administration, and linguistics.
- Research for computers :
  - Hardware
  - Algorithm
  - Programming

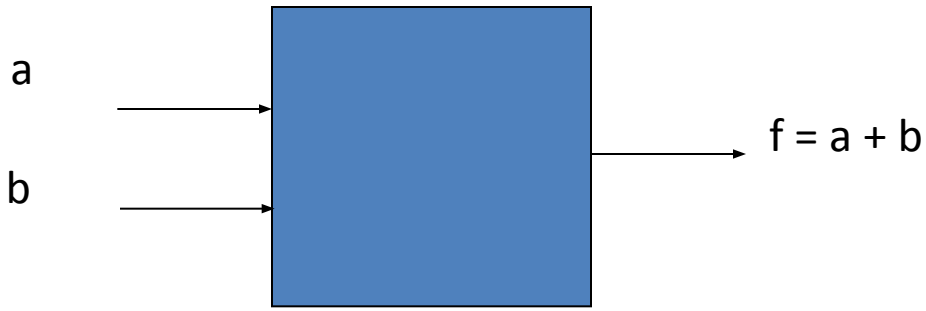
THE SCIENCE OF ABSTRACTION

Envision Computer Systems

- Today's computer systems are extremely complex and can be overwhelming when viewed in all their detail.
- We envision the computer in terms of component
  - ignore the internal details of components
  - concentrate on how components interact with other components

Abstraction

- Abstraction is a simplification technique.
  - extract the external properties for components
  - ignore the internal details
- Use abstract modules to construct more complex function



Any
Questions