

UNIVERSITY OF MINNESOTA
Minnesota Robotics Institute

ROB 8970

ROBOTICS COLLOQUIUM

FALL 2025

Class Report – Lecture 7 (10/17/2025)

Speakers : John Angeli and Corey Johnson (Mayo Clinic)

Apurv Kushwaha

kushw022@umn.edu

John Angeli and Corey Johnson from Mayo Clinic talked about *Enhancing Healthcare Operations with Robotics*. They discussed how robotics, AI and automation are being introduced to hospitals to help both staff and patients. They started with talking how automation, even when not directly involved with patients, can help nurses and clinicians from basic laborious work so they can spend more time with patients.

Moreover, they described several use cases already being explored and used at Mayo Clinic, like automated supply chain management, linen transport, cleaning and disinfection, food and pharmacy delivery etc. These systems help reduce physical workload, improve safety, and ensure reliability in critical tasks such as medication transport and controlling infection. A key takeaway from this talk was that robotics in healthcare is not just about replacing people, but about supporting them by reducing fatigue, minimizing errors, and tackling staff shortage.

Questions

- I have previously worked in a med-tech startup, I understand how even a small glitch or miscalculation in medical technology/machines can have serious consequences. Has it ever happened when an inaccuracy or malfunction in a new healthcare technology posed a risk to patients or staff, and how can one take care of such issues beforehand?
- Assume a situation where new technology is very useful but incompatible with hospital's current workflow or data management. how do you tackle such integration challenges without disrupting ongoing clinical operations?

Comments

- The talk gave a very real view of how robotics can make healthcare run more efficiently while still keeping the focus on patient care.
- I liked how the speakers were honest about the challenges especially safety, regulation, and trust which are often overlooked in discussions about healthcare robots.
- The examples of cleaning and pharmacy robots were interesting because they showed how even small improvements in basic tasks can create a big positive impact for patients.

What I Liked

- The session was engaging and easy to follow with real examples.
- I liked how they focused on how robotics should assist healthcare workers, not replace them, and that human connection will always remain necessary to medicine.
- It was good to see engineering applied to a field where even small improvements can save lives and reduce stress for staff.

Areas for Improvement

- The presentation was clear and well-balanced overall.

Overall Assessment

This talk provided a unique perspective on robotics beyond factories and warehouses. Speakers showed how automation can improve healthcare efficiency while protecting the human element of care. Their knowledge and experience about safety, regulation, and collaboration made it clear that robotics or AI in healthcare is as much about people as it is about technology. It was an informative and encouraging talk that connected engineering innovation with care in practice.