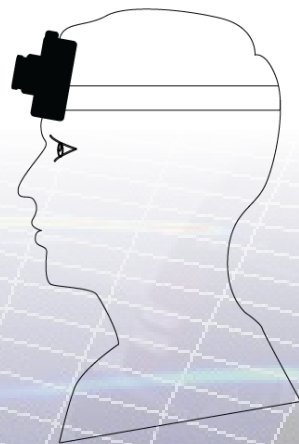
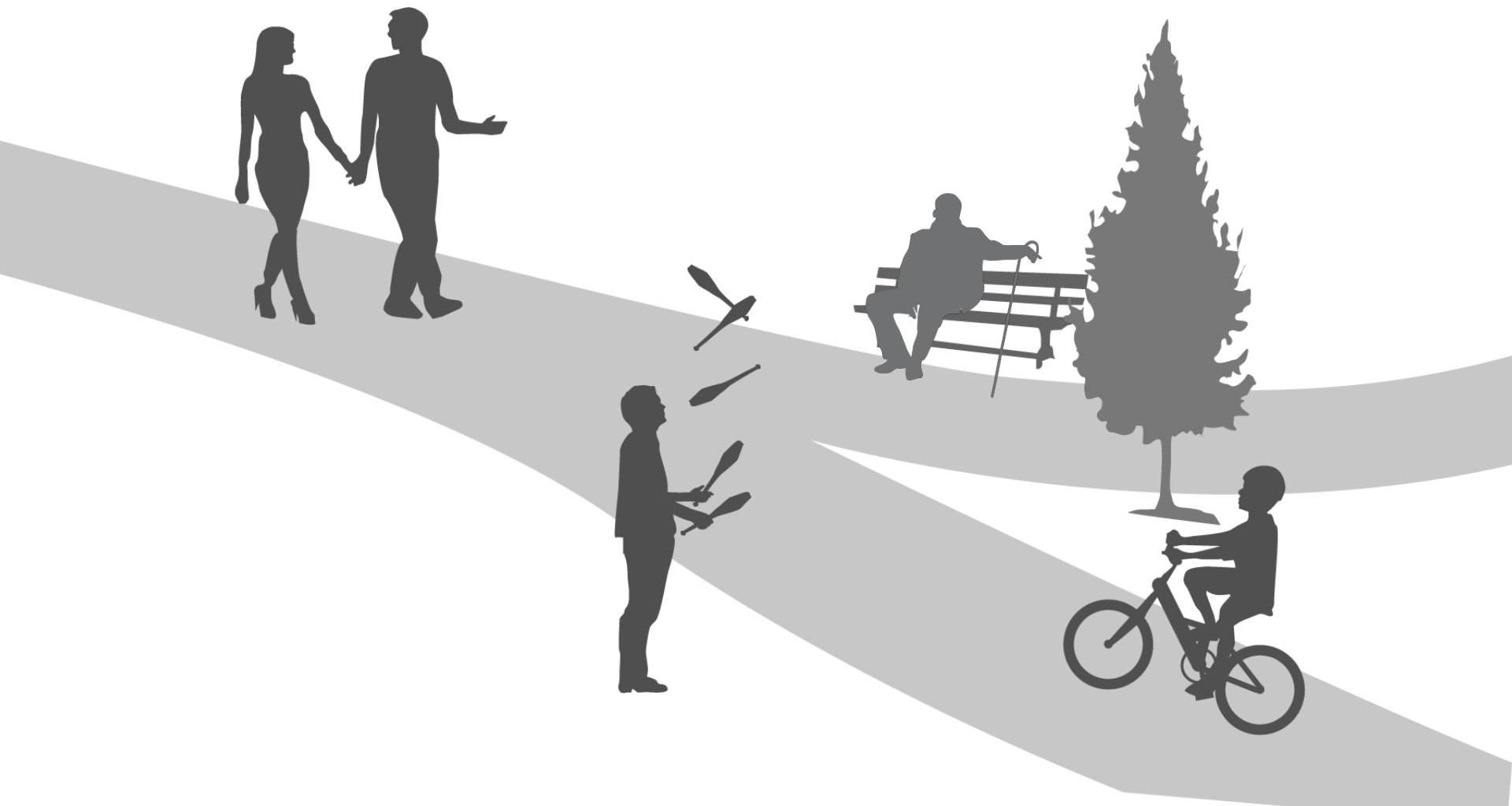


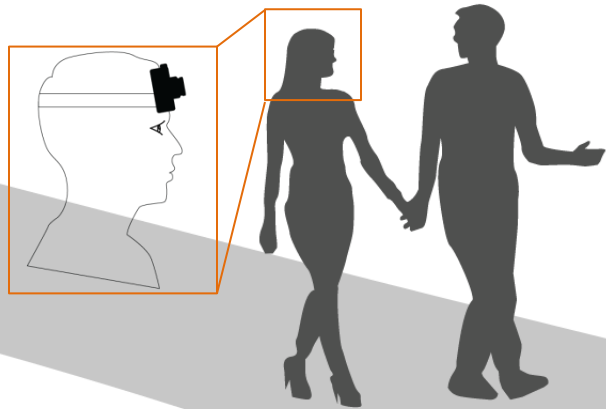
CVPR Tutorial: First Person Vision



Understanding her behaviors



Understanding her behaviors



Understanding her behaviors



What can first person cameras tell us about me?



What can first person cameras tell us about me?



- Attention
 - Personal attention
 - Social attention



What can first person cameras tell us about me?

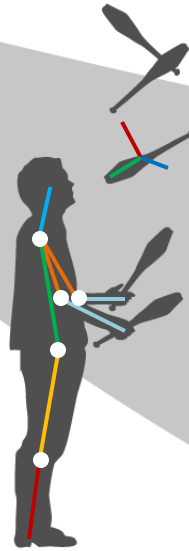
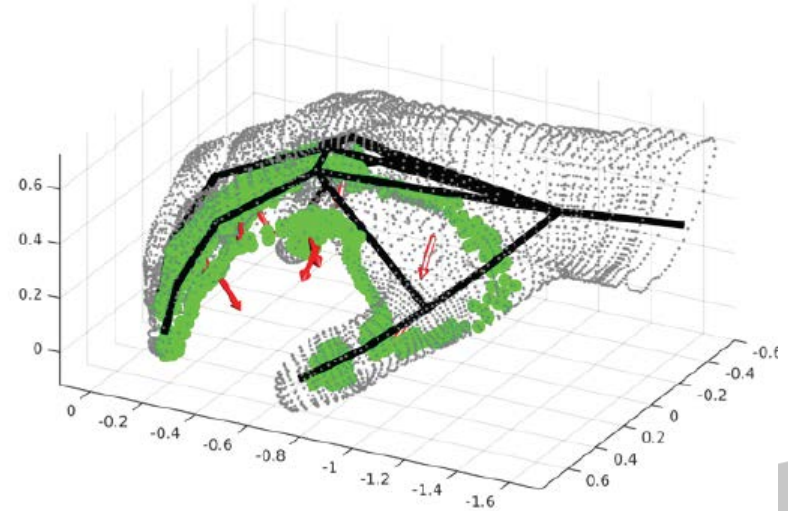


- Attention
 - Personal attention
 - Social attention



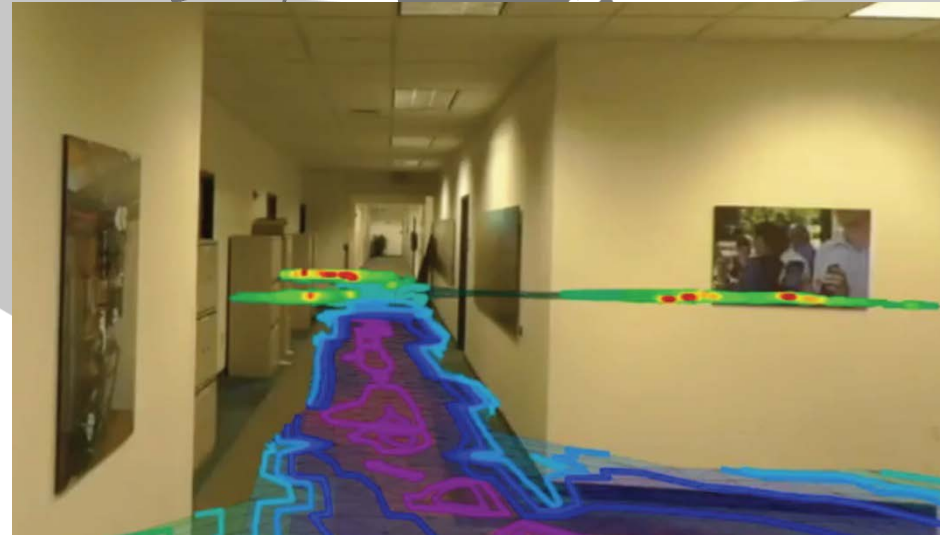
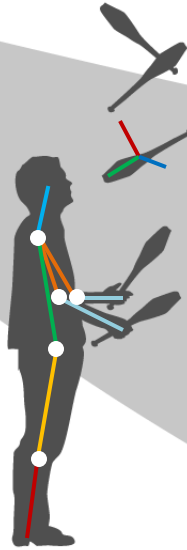
What can first person cameras tell us about me?

- Attention
 - Personal attention
 - Social attention
- Kinematics
 - Pose/object
 - Actions



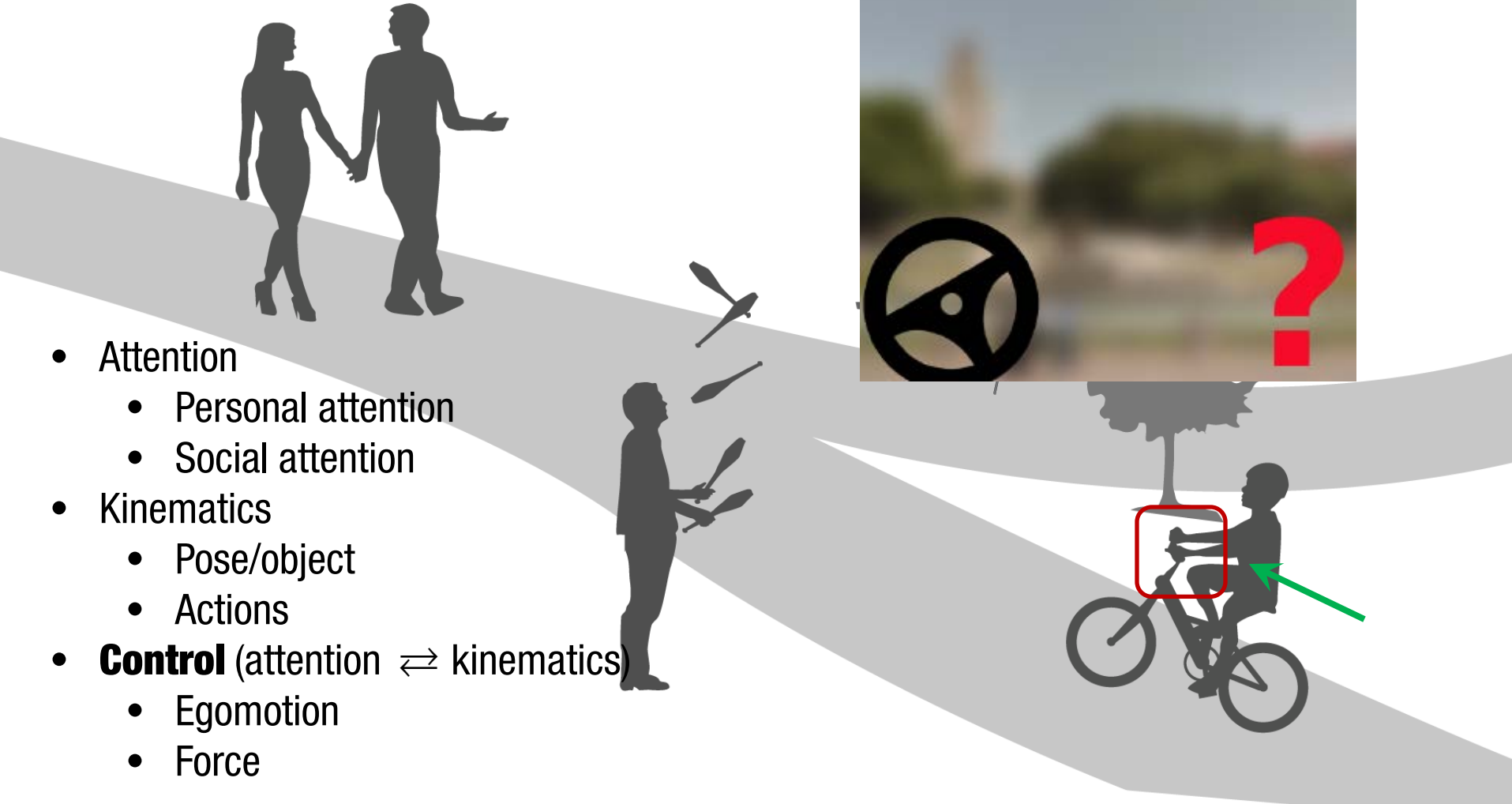
What can first person cameras tell us about me?

- Attention
 - Personal attention
 - Social attention
- Kinematics
 - Pose/object
 - Actions



What can first person cameras tell us about me?

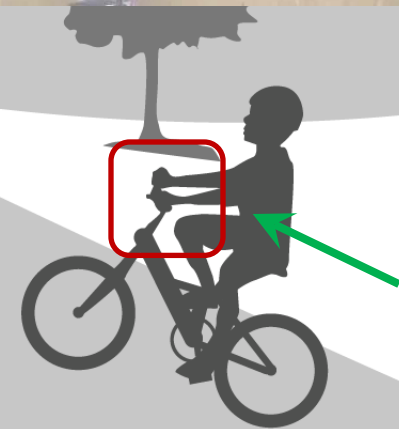
- Attention
 - Personal attention
 - Social attention
- Kinematics
 - Pose/object
 - Actions
- **Control** (attention \rightleftharpoons kinematics)
 - Egomotion
 - Force



What can first person cameras tell us about me?



- Attention
 - Personal attention
 - Social attention
- Kinematics
 - Pose/object
 - Actions
- **Control** (attention \rightleftharpoons kinematics)
 - Egomotion
 - Force



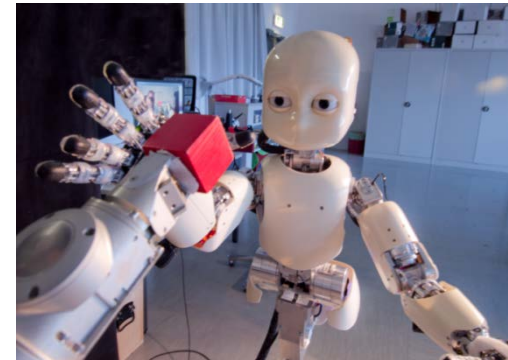
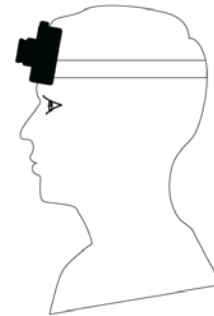
Broader Impact of First Person Vision

Sensorimotor Behaviors



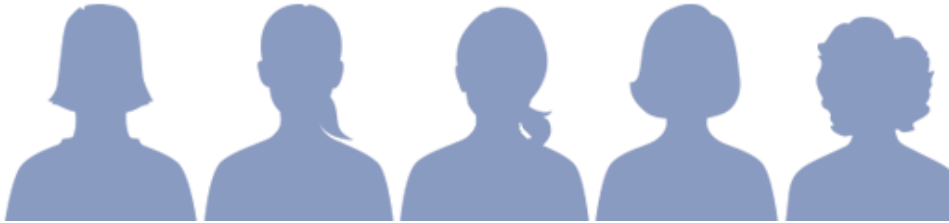
Children can learn riding bicycle in two week.
How do they learn?

- Motor skill learning
- Hand-eye coordination

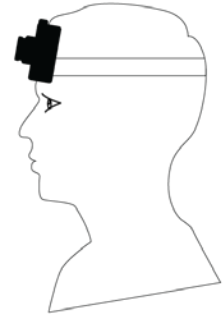
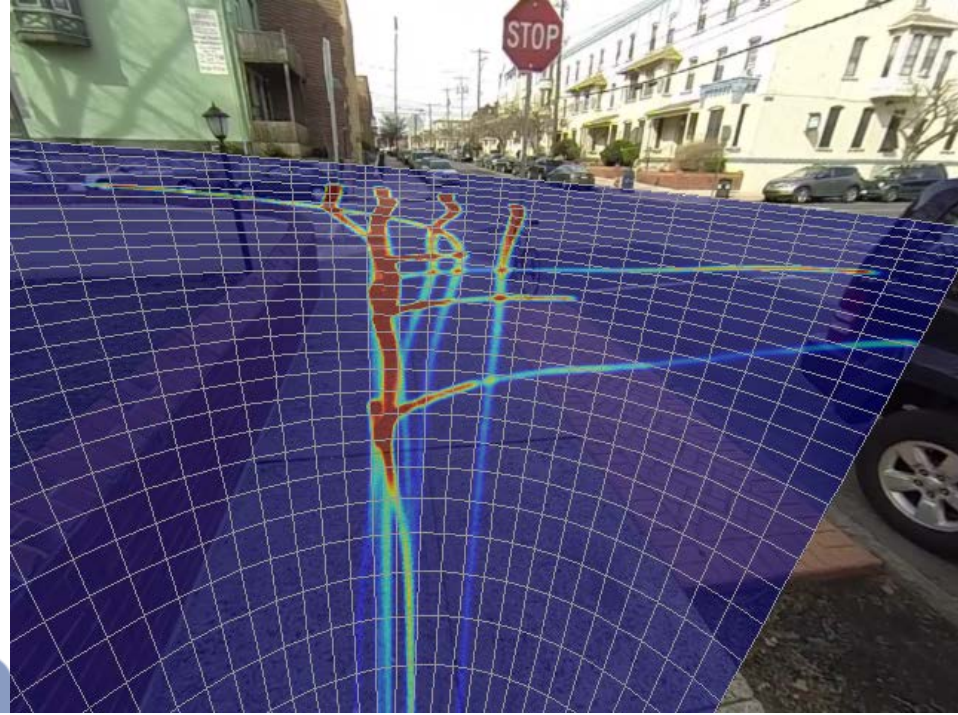


Personalized AI:

Machines that learn for me



- Personal preference
- Personal memory
- Personal relationship
- Personal space

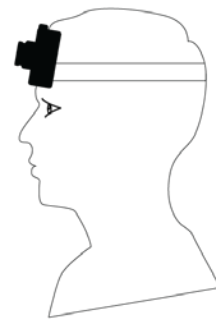
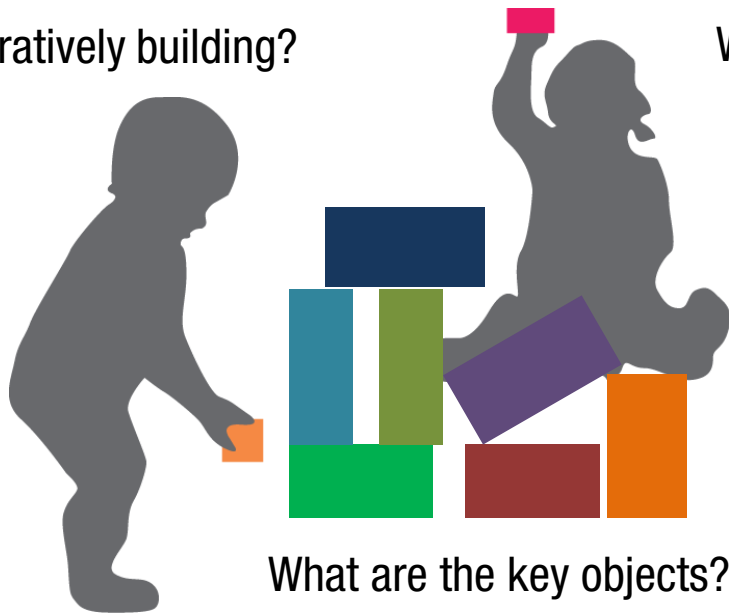


Computational Behavioral Science



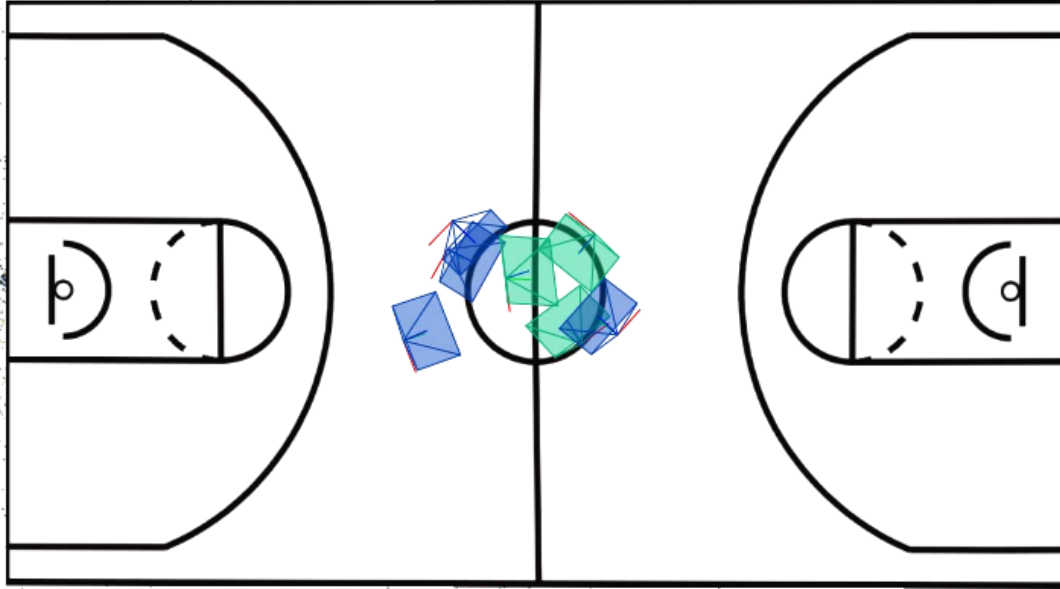
What are they collaboratively building?

What are they looking at?

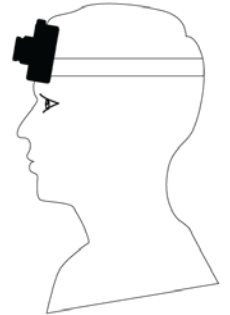


What are the key objects?

Sport Analytics



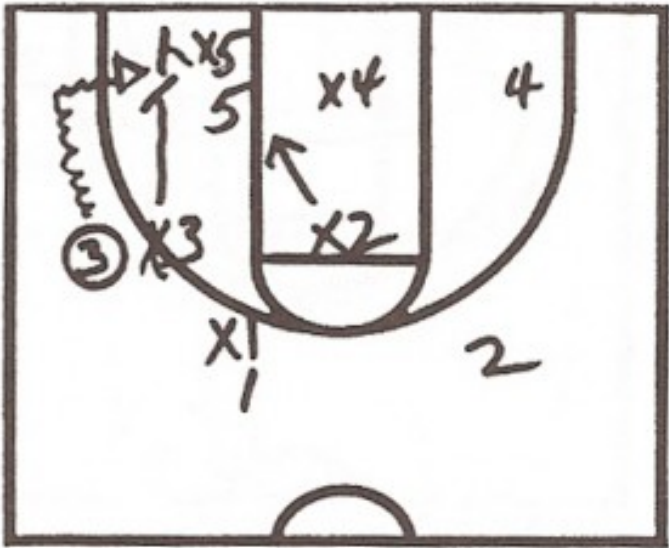
- Kinematics to visual sensation



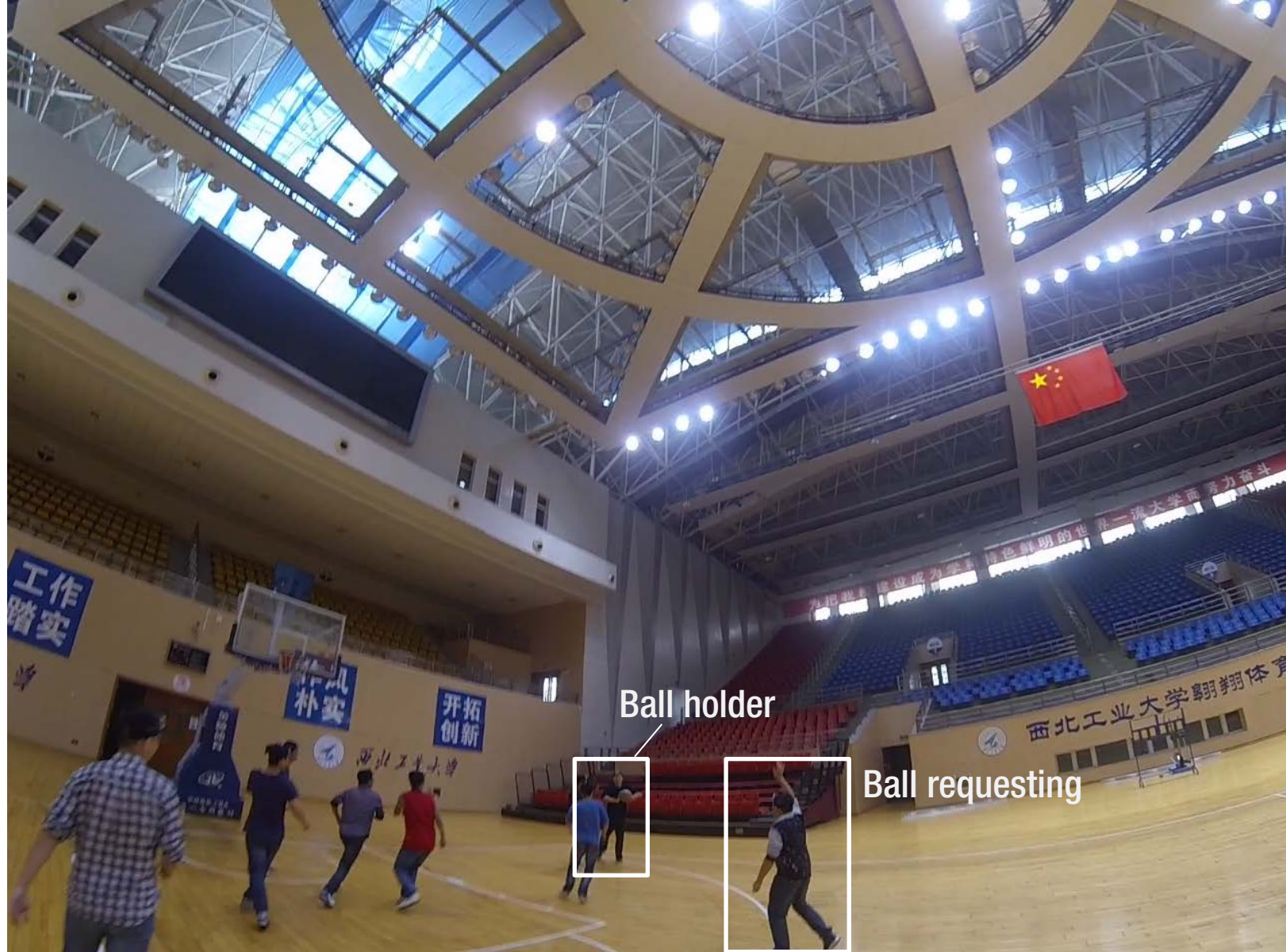
Sport Analytics



Basketball game in third person view



Coach's note



Ball holder

Ball requesting



Ball holder

Specialized Tasks





**“First person vision is
an embedded human-system symbiosis.”**

- Takeo Kanade



First person vision is all about me.

an embedded human-system symbiosis.”

- Takeo Kanade