Last Time

- practical UQ methods
- conformal prediction

Lecture 11

EAIS S 25

ANDREA BAJCSY

This Time:

- "system-level" UQ / anomalies

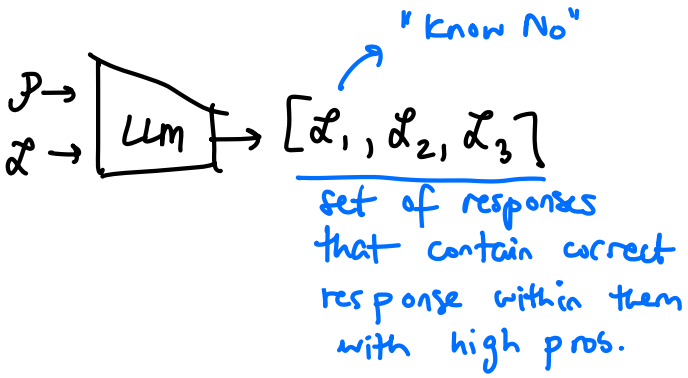
Announcement: HW #3 due April 2nd

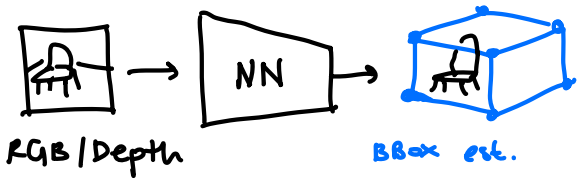
"System-level" Uncertainty / Anomalies

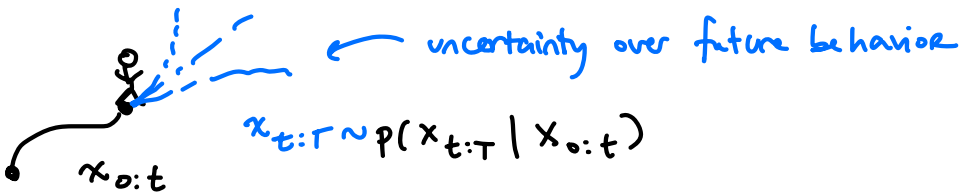
"prediction confidence"

"input/data uncertainty"

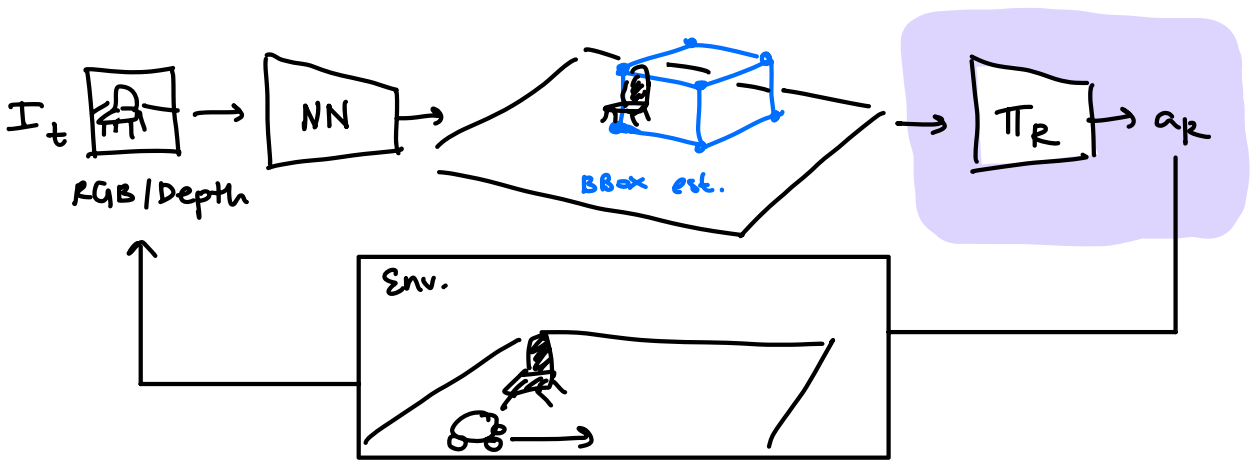
So far, we have been talking about SINGLE data-driven components of an autonomy "stack" and how to model their uncertainty







BUT, all these models "live" within the broader robotics pipeline & together influence the robot's next decision & thus, long-term outcomes.



System-level uncertainty

1) consider the impact of the uncertainty (or anomalous data) on the downstream decision-making
2) use components throughout the autonomy stack to mitigate negative consequences.