Artificial Intelligence
Advanced Topics in AI & ML
Embodied AI: Self-Driving

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Content

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Embodied AI

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- *Embodiment hypothesis*: intelligence emerges in the interaction of an agent with an environment and as a result of sensorimotor activity
- *Sim2Real*: an approach to train embodied agents in realistic simulators and then transferring the learned skills to reality
- Read material: link

Automation Levels

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- North star is L5 and limited but still fully functional AI starts with L4 (and even L3 w/ human assistance during fallback)
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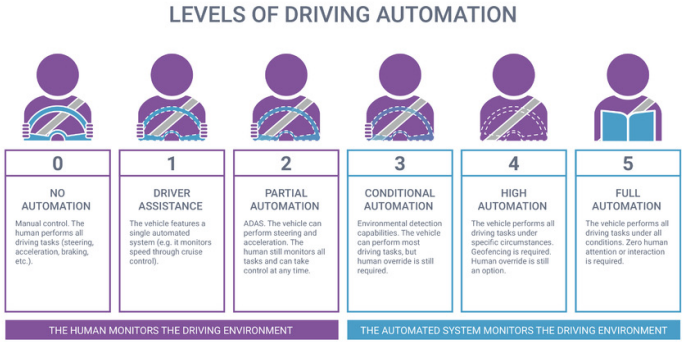

Brief History of Autonomous Driving

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- The main source of challenges: DARPA Grand and Urban Challenges (2004–2007)
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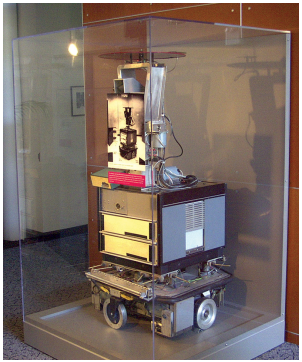

Self-Driving

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- Highly dependent on the training/eval data, hardware used, settings etc. — that's why there is no open self-driving model (at least, now)
- Main modules are Mapping, Perception, Prediction, Planning, Control
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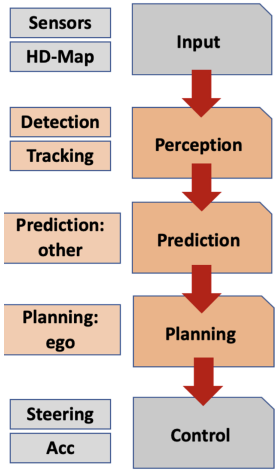

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3. Self-driving is a super challenging task (fully not solved yet)
4. Autonomy stack is an approach to decompose the self-driving task
5. Unclear when we will have L5 systems on the road: probably the complexity is the same as building AGI

Thank you!