

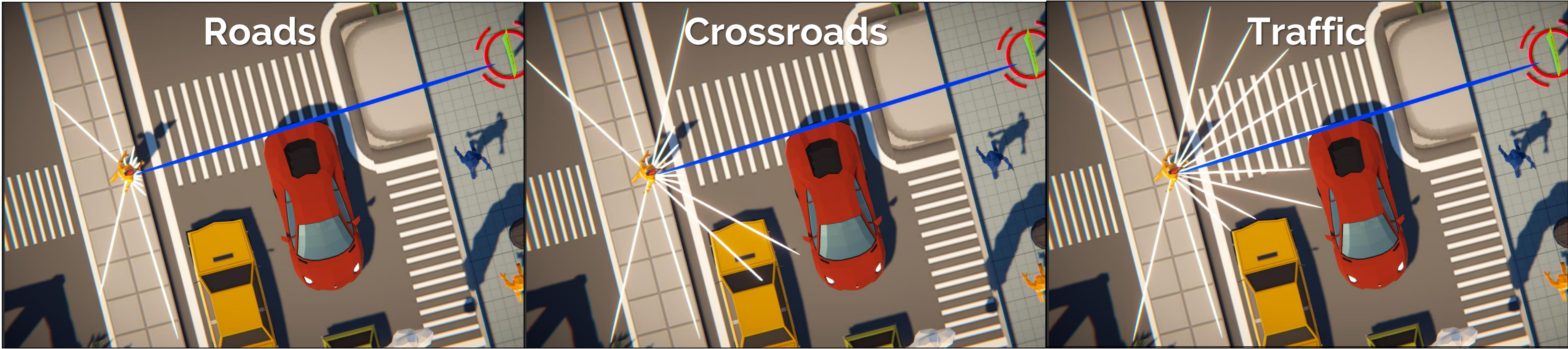
# Why Did the Human Cross the Road?\*

Panayiotis Charalambous  
p.charalambous@rise.org.cy

Yiorgos Chrysanthou  
y.chrysanthou@rise.org.cy

Many crowd and traffic simulation algorithms have been proposed. Despite some high-quality results, most of these systems do not consider important **heterogeneous interactions** between humans and traffic. Our goal is to create a multi-agent system in an urban setting where pedestrians and traffic interact gracefully in the presence of each other. In this work, we demonstrate some initial results from a deep reinforcement learning based framework used to train agents safely cross streets with traffic. Our framework can simulate street crossing behavior under various conditions without any explicit knowledge of the rules that govern this behavior.

**State** is *temporal*, *goal-centric* and records *distances* to roads, crossroads and traffic separately.



\*Besides taking the chicken for a ride...