



Tutorial RL Bootcamp Salzburg

Simon Hirlaender

Details of the problem I

Initially we start with a fully observable linear, time-invariant system

The dynamics is of the form: $s_{t+1} = \mathbf{R}\dot{a}_t + s_t$, where

$$\mathbf{R} = \begin{pmatrix} a_{11} & 0 & 0 & \cdots & 0 \\ a_{21} & a_{22} & 0 & \cdots & 0 \\ a_{31} & a_{32} & a_{33} & \cdots & 0 \\ \vdots & \vdots & \vdots & \ddots & \vdots \\ a_{n1} & a_{n2} & a_{n3} & \cdots & a_{nn} \end{pmatrix}.$$

 This stems from the downstream causality. This property can be used, when solving such a system.

 For the moment we consider the system without respecting the special shape of the dynamics.





Details of the problem I



















e cons

the dynamics









































































observ

g such



ır I

This s





\/



litv









out respec

For the moment w

perty c



er the system







 $s_{t+1} = \mathbf{R}\dot{a}_t + s_t$

$$\mathbf{a} = \begin{pmatrix} a_{11} & 0 & 0 & \cdots & 0 \\ a_{21} & a_{22} & 0 & \cdots & 0 \\ a_{31} & a_{32} & a_{33} & \cdots & 0 \\ \vdots & \vdots & \vdots & \ddots & \vdots \\ a_{n1} & a_{n2} & a_{n3} & \cdots & a_{nn} \end{pmatrix}$$

١ VΛ V















cons e

the dynamics























































