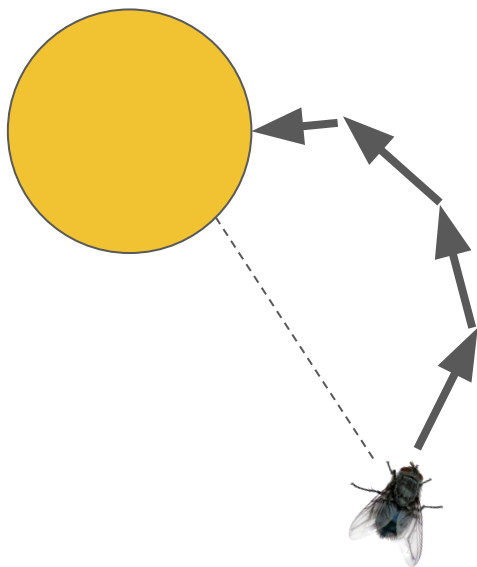
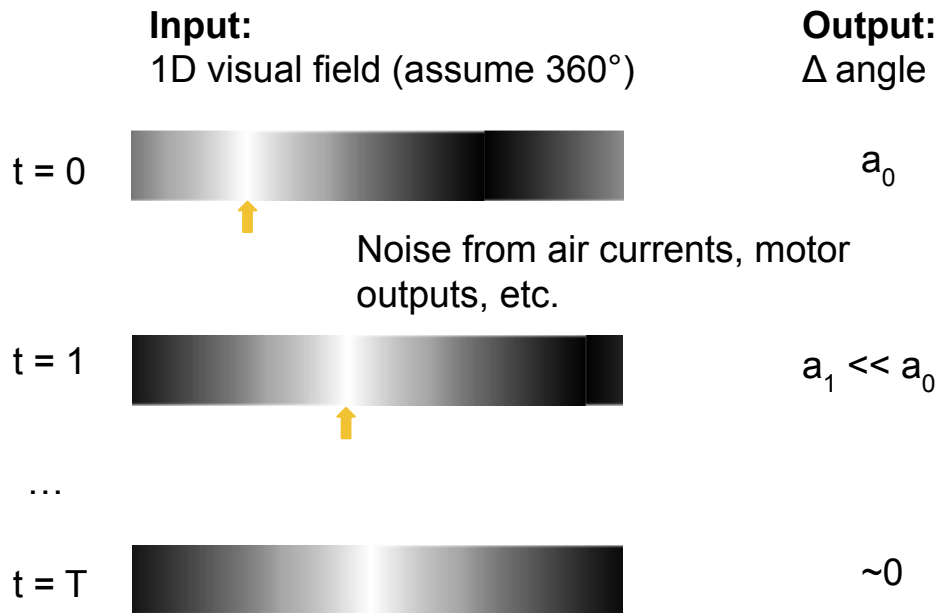


Training RNN to mimic landmark attraction in insects

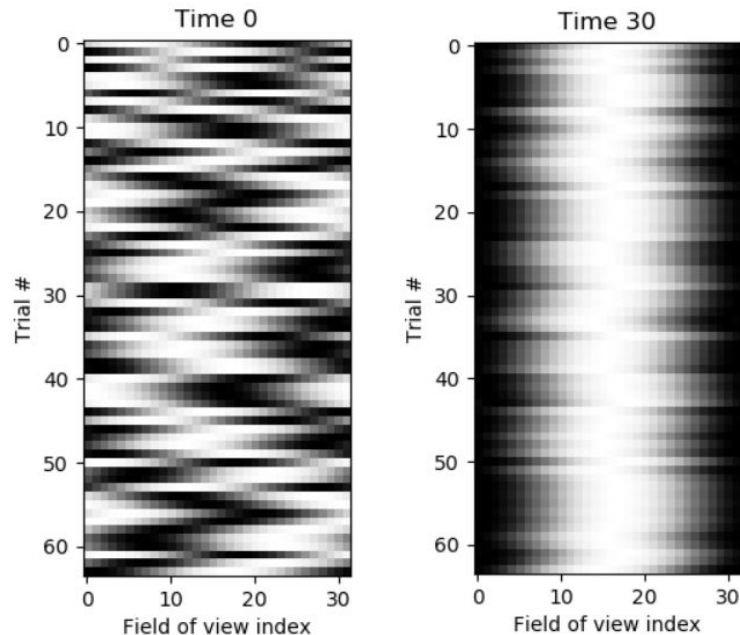
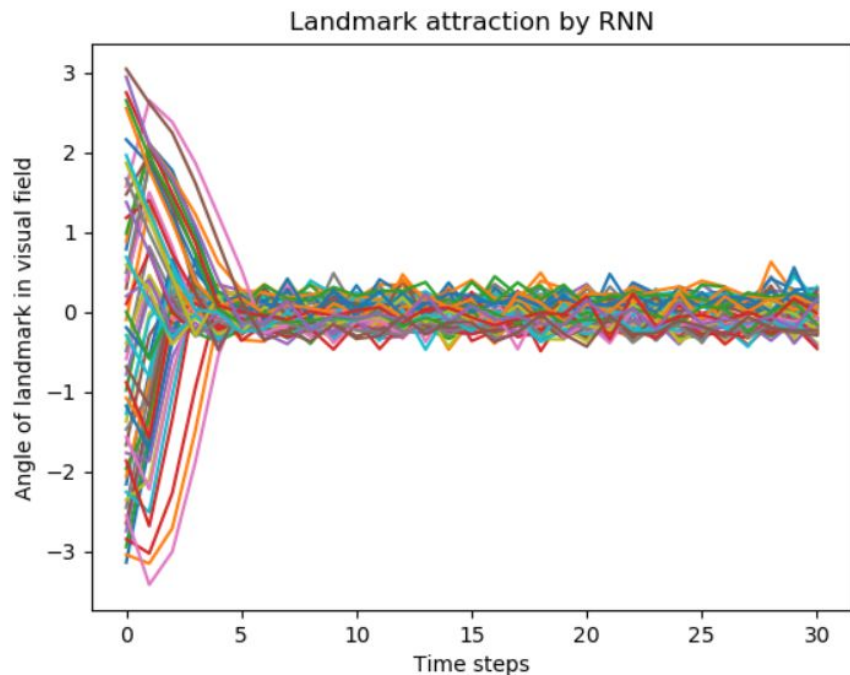
- Insects are drawn to orient towards certain types of “landmarks”, such as bright lights and vertical bars [1]
- Can we train a vanilla RNN to exhibit the same behavior?



[1] Cope et al. (2017) PLoS One.



Results



Represents optimization view

- the insect/RNN is performing an optimization of its heading direction
- we are optimizing the RNN's behavior to mimic biological behavior in an experimentally verified task (with more biologically faithful models, allows experimental comparison)