**Modelling target selection dynamics in visual foraging tasks**

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In visual foraging tasks, participants must find as many targets as they can. The targets are typically hidden among distracters and there are multiple different classes of targets. Previous work (Kristjánsson, et al, 2014, *PloS one* 9.6) has demonstrated that when the targets are defined in terms of a conjunction of features, participants tend to select targets in a small number of longs runs, typically selecting most of the targets of one class before switching to another. This contrasts with single feature foraging, in which participants are much more likely to switch from one target class to another. In our recent work, we presented a generative model for target selection behaviour in this task. In this talk, I will give examples of how this modelling framework can be used to further our understanding of foraging behaviour. For example, when the task is made more realistic by using a 3D virtual reality environment (Prpic, et al, 2019, *PloS one* 14.7), participants place more weight on selecting targets that lie ahead of them. We also demonstrate that the distinction between feature and conjunction conditions can generalise to easy and hard conditions. Finally, we examine how stopping rules could be implemented in the model.