

Soft Affordance Math

Input: Everything in **bold** (and an optional parameter c for case 1, that specifies the emphasis of the given priorities (multiply each count given to each Dirichlet by c))

1 Expert Designed with Priority

–Actions–

$$\begin{aligned}\Delta_0(priority_0) &= \{\{a_1, \mathbf{0}\}, \{a_2, \mathbf{3}\}, \dots, \{a_{|A|-1}, \mathbf{7}\}, \{a_{|A|}, \mathbf{10}\}\} \\ &\vdots \\ \Delta_k(priority_k) &= \{\{a_1, \mathbf{8}\}, \{a_2, \mathbf{6}\}, \dots, \{a_{|A|-1}, \mathbf{0}\}, \{a_{|A|}, \mathbf{1}\}\}\end{aligned}$$

–Action Set Size–

$$\begin{aligned}\Delta_0(n_0) &= \{\{1, \mathbf{0}\}, \{2, \mathbf{3}\}, \dots, \{n-1, \mathbf{7}\}, \{n, \mathbf{10}\}\} \\ &\vdots \\ \Delta_k(n_k) &= \{\{1, \mathbf{6}\}, \{2, \mathbf{3}\}, \dots, \{n-1, \mathbf{4}\}, \{n, \mathbf{2}\}\}\end{aligned}$$

2 Expert Designed with Probabilities

–Actions–

$$\begin{aligned}\Delta_0(\Pr[actions_0]) &= \{\{a_1, \mathbf{0.6}\}, \{a_2, \mathbf{0.04}\}, \dots, \{a_{|A|-1}, \mathbf{0.1}\}, \{a_{|A|}, \mathbf{0}\}\} \\ &\vdots \\ \Delta_k(\Pr[actions_k]) &= \{\{a_1, \mathbf{0.1}\}, \{a_2, \mathbf{0.6}\}, \dots, \{a_{|A|-1}, \mathbf{0}\}, \{a_{|A|}, \mathbf{0}\}\}\end{aligned}$$

–Action Set Size–

$$\begin{aligned}\Delta_0(\Pr[n_0]) &= \{\{a_1, \mathbf{0.6}\}, \{a_2, \mathbf{0.04}\}, \dots, \{a_{|A|-1}, \mathbf{0.1}\}, \{a_{|A|}, \mathbf{0}\}\} \\ &\vdots \\ \Delta_k(\Pr[n_k]) &= \{\{a_1, \mathbf{0.1}\}, \{a_2, \mathbf{0.6}\}, \dots, \{a_{|A|-1}, \mathbf{0}\}, \{a_{|A|}, \mathbf{0}\}\}\end{aligned}$$