Table 1: Discounted return of different choices of $\alpha$, averaged over 3 random seeds. The best results have been boldened, and $\alpha = 1$ correpsonds to original GoFAR algorithm

| $\alpha \backslash$ Env | FetchReach | FetchPick | FetchPush | FetchSlide | HandReach |
|---|---|---|---|---|---|
| 0.01 | $27.4 \pm 0.29$ | $18.5 \pm 0.1$ | $18.0 \pm 1.8$ | $2.36 \pm 1.13$ | $8.72 \pm 1.69$ |
| 0.02 | $27.4 \pm 0.32$ | $18.7 \pm 1.8$ | $18.6 \pm 2.6$ | $2.40 \pm 0.47$ | $7.96 \pm 1.27$ |
| 0.05 | $27.4 \pm 0.32$ | $17.3 \pm 1.1$ | $19.3 \pm 2.0$ | $3.18 \pm 0.90$ | $\mathbf{8.98} \pm 3.11$ |
| 0.1 | $27.4 \pm 0.33$ | $20.3 \pm 1.3$ | $\mathbf{20.3} \pm 2.5$ | $3.22 \pm 0.38$ | $5.28 \pm 1.25$ |
| 0.2 | $27.4 \pm 0.32$ | $\mathbf{20.7} \pm 0.9$ | $17.7 \pm 2.9$ | $2.25 \pm 0.23$ | $2.92 \pm 0.98$ |
| 0.5 | $\mathbf{27.5} \pm 0.29$ | $18.5 \pm 0.4$ | $20.1 \pm 2.2$ | $\mathbf{3.47} \pm 1.08$ | $5.74 \pm 2.72$ |
| 1 | $27.3 \pm 0.34$ | $18.2 \pm 1.2$ | $19.6 \pm 1.6$ | $2.75 \pm 1.84$ | $7.13 \pm 3.60$ |
| 2 | $27.4 \pm 0.29$ | $18.3 \pm 0.7$ | $19.6 \pm 1.4$ | $1.80 \pm 0.66$ | $3.99 \pm 1.88$ |

Table 2: Final distance of different choices of $\alpha$, averaged over 3 random seeds. The best results have been boldened, and $\alpha = 1$ correpsonds to original GoFAR algorithm

| $\alpha \backslash$ Env | FetchReach | FetchPick | FetchPush | FetchSlide | HandReach |
|---|---|---|---|---|---|
| 0.01 | $0.0171 \pm 0.0017$ | $0.042 \pm 0.004$ | $0.033 \pm 0.001$ | $0.1177 \pm 0.012$ | $0.0269 \pm 0.0049$ |
| 0.02 | $0.0168 \pm 0.0016$ | $0.045 \pm 0.012$ | $0.031 \pm 0.002$ | $0.1085 \pm 0.010$ | $0.0274 \pm 0.0049$ |
| 0.05 | $0.0181 \pm 0.0011$ | $0.052 \pm 0.013$ | $0.032 \pm 0.002$ | $0.1061 \pm 0.009$ | $0.0270 \pm 0.0049$ |
| 0.1 | $0.0173 \pm 0.0014$ | $0.032 \pm 0.010$ | $\mathbf{0.027} \pm 0.002$ | $0.1018 \pm 0.002$ | $0.0275 \pm 0.0043$ |
| 0.2 | $0.0172 \pm 0.0019$ | $\mathbf{0.031} \pm 0.004$ | $0.031 \pm 0.003$ | $0.1029 \pm 0.010$ | $0.0275 \pm 0.0046$ |
| 0.5 | $\mathbf{0.0166} \pm 0.0011$ | $0.044 \pm 0.009$ | $0.031 \pm 0.005$ | $\mathbf{0.1017} \pm 0.017$ | $\mathbf{0.026826} \pm 0.0049$ |
| 1 | $0.0175 \pm 0.0013$ | $0.043 \pm 0.011$ | $0.043 \pm 0.012$ | $0.1202 \pm 0.019$ | $0.026828 \pm 0.0044$ |
| 2 | $0.0171 \pm 0.0011$ | $0.034 \pm 0.005$ | $0.032 \pm 0.001$ | $0.1044 \pm 0.011$ | $0.0275 \pm 0.0045$ |