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**Algorithm 4** Run texton framework

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1: procedure RUN_TREXTON
2:    $t \leftarrow t + 1$ 
3:    $I_t \leftarrow \text{RECEIVE\_IMG\_FROM\_WEBCAM}$ 
4:    $\tilde{I}_t \leftarrow \text{STANDARDIZE\_IMAGE}(I_t)$ 
5:    $\mathcal{H}_t \leftarrow \text{GET\_HISTOGRAM}(\tilde{I}_t)$ 
6:    $z_t^x, z_t^y \leftarrow \text{PREDICT\_POSITION}(\mathcal{H}_t)$ 
7:    $f_t^x, f_t^y \leftarrow \text{CALC\_FLOW}(I_t)$ 
8:    $\mathcal{X}_t \leftarrow \text{PARTICLE\_FILTER}(\mathcal{X}_{t-1}, z_t^x, z_t^y, f_t^x, f_t^y)$ 
9:    $x_t, y_t \leftarrow \text{WEIGHTED\_AVERAGE}(\mathcal{X}_t)$ 
10:   $\text{SEND\_POS}(x_t, y_t)$ 
```

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