

?















Query: 

Answer: 

**2**

Capture Data

Create Virtual World

**1**

Arena

A close up of a screen

Description automatically generatedA picture containing object, indoor, black, sitting

Description automatically generated

Run Simulation

Train Models

**3**

A picture containing table, sitting, computer, photo

Description automatically generated

NN1

A close up of a logo

Description automatically generated

X

Y



Custom Robot



A close up of a logo

Description automatically generated

NN2

X

Y

Predict Robot State





**4**

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.

.

Odometry Data



NN8



Particles

Filter

A close up of a logo

Description automatically generated

X

Y



A close up of a map

Description automatically generated

Visualization Tool



**5**

[NN1, …, NN8]

Set of Particles



Weighted Average









Robot Window