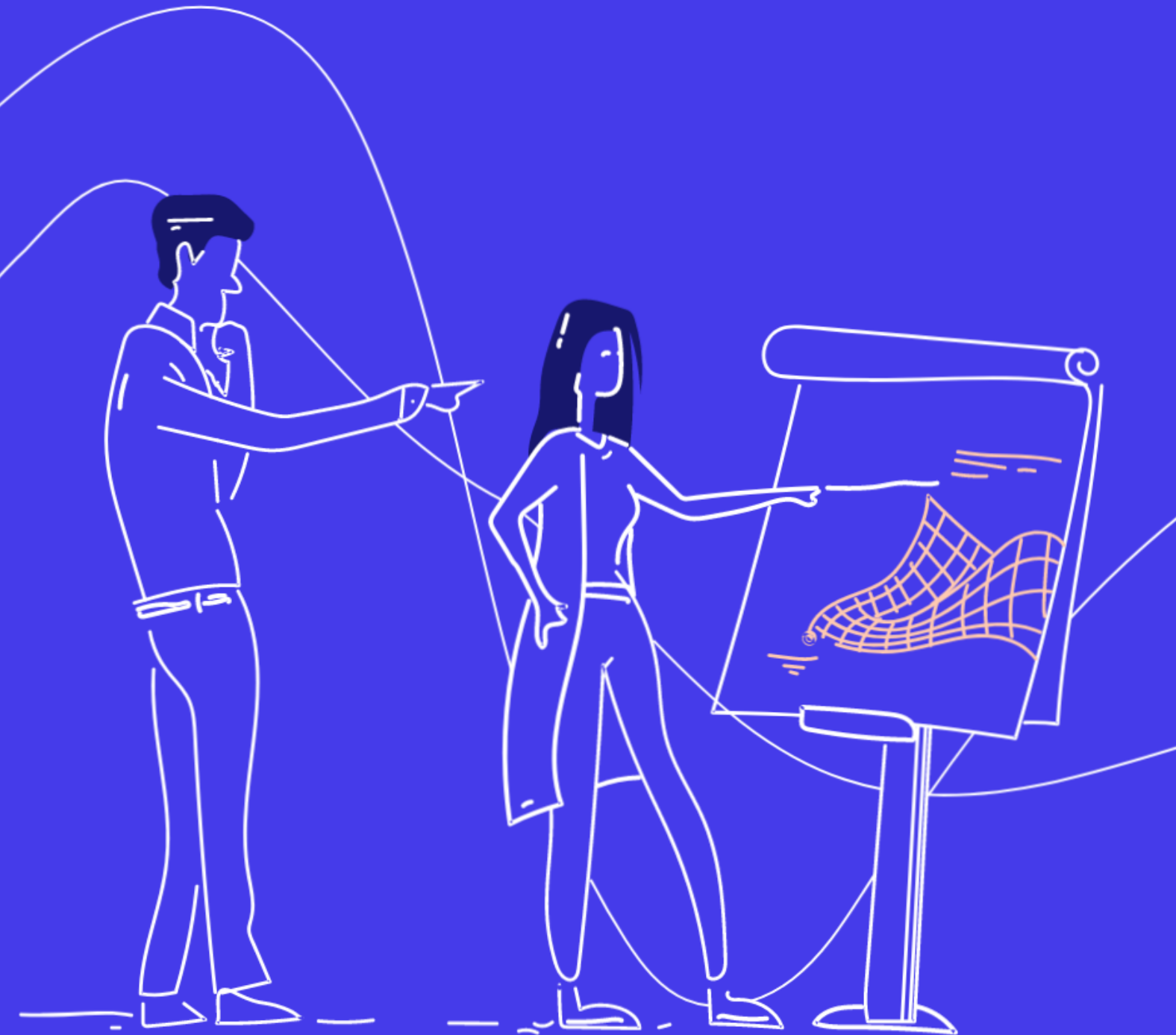sciengineer

# Reinforcement Learning in MATLAB and Simulink

SciEngineer's training courses are designed to help organizations and individuals close skills gaps, keep up-to-date with the industry-accepted best practices and achieve the greatest value from MathWorks® and COMSOL® Products.

# Reinforcement Learning in MATLAB and Simulink

This one-day course introduces reinforcement learning in the MATLAB® and Simulink® environments, focusing on using the Reinforcement Learning Toolbox™.

# Prerequisites

MATLAB Fundamentals and Simulink Fundamentals

DURATION

1 Day

LEVEL

Medium

TOPICS

## Day 1

- Environment and Rewards
- Policy and Agent
- Neural Networks and Training
- Deployment

Reinforcement Learning in MATLAB and Simulink

SciEngineer's Training Services

# Environment and Rewards

OBJECTIVE: Set up an environment and shape rewards in Simulink or MATLAB.

- Set up environment in Simulink
- Write a reward function
- Set up an agent using Simulink and MATLAB
- Connect agent and environment

# Policy and Agent

OBJECTIVE: Create an policy representation and construct an agent.

- Represent a policy with a neural network
- Create a reinforcement learning agent in MATLAB
- Specify simulation options to run a simulation

# Neural Networks and Training

OBJECTIVE: Assemble a neural network for a policy representation and train an agent.

- Assemble a neural network
- Deep Network Designer app
- Training an agent
- Reinforcement Learning Designer app

# Deployment

OBJECTIVE: Generate code from a trained agent.

- Generate code
- Validation of code

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**Expand your knowledge**