What's new in Microsoft Project Bonsai
September 2021

What is Project Bonsai?

Project Bonsai is a low-code AI development platform that speeds the creation of AI-powered automation. Without requiring data science or computer science, engineers can build AI that provides guidance to decision makers or works independently.

Areas of investment:

Our most recent innovations and improvements are across four key areas:

1. **Easy to use** so you can start building AI quickly.
2. **Enable AI for engineers** to empower those without data science expertise to build AI.
3. **Simulation integrations** that allow you to safely train your AI.
4. **Deployment support** for moving AI into production environments.

What's new?

Easy to use:

Improvements to experiences to make them simple, fast, and intuitive include:

- **Selectors:** Brains can learn the best time to use various control policies. Using selectors, brains will automatically apply the optimal skills and strategies based on the conditions.
- **Improvements to assessment:** Drill down into each assessment to understand the actions and the state at the per episode level. Understand if the AI is improving.

Enable AI for engineers:

Empowering engineers to build AI without a data science background is enabled with the following:

- **Low-code visual authoring:** New UI allows AI creation through drag-and-drop blocks. Users can easily build out the skills and strategies that the AI must learn without writing code.

- **Import ML models:** Import Machine Learning (ML) models as imported concepts. Imported concepts let you use TensorFlow and Open Neural Network Exchange (ONNX) compatible models trained on other platforms to train Project Bonsai brains.

Simulation integrations:

Simulations are used to safely train and validate that an AI that will work in the physical world. The following is the current list of integrations with simulation products:

List of Supported simulators (as of September 28, 2021):

Simulator	***Software***	***Details***
Siemens	Amesim	Mechatronic systems simulation platform
Siemens	Flomaster	Tool for fluids engineering with solvers and in-built correlations
Fluent (Digital Twin Builder)	ANSYS	Digital Twin based on multi-physics engineering CFD simulations.
MathWorks	MATLAB	Mathematical computing software
MuJoCo	MuJoCo	High fidelity robotics simulation
KBC	Petro-Sim	Petro-SIM is a refinery simulator used in energy
Siemens	Tecnomatix Plant Simulation	Discrete event simulation, visualization, analysis and optimization of production systems and logistics processes
Siemens	Tecnomatix Process Simulate	Digital manufacturing solution for manufacturing process verification in a 3D environment
AnyLogic	7,8	Discrete event systems simulator
OpenAI Gym	Python	Toolkit for developing and comparing reinforcement learning algorithms
MathWorks	Simulink	Simulink in multidomain dynamical systems
Wood PLC	VP Link	Distributed control systems and operator training systems

Deployment support:

You get total control over how you deploy AI – whether it is how your AI works with people or where you choose to deploy it, here are the latest deployment capabilities:

- **Export AI agents through Azure IoT Central:** Connect your Project Bonsai workspace to Azure IoT Central and export AI agents to target hardware using Azure IoT Central deployment functionality.