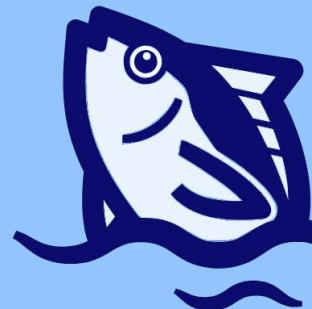


v1.5.0

Release Notes



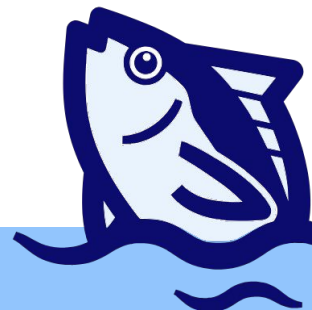
Added

- Added "Run in Separate Process" option for optimization
 - Enabling this runs optimization in a process separate from Rhino, avoiding conflicts with Grasshopper's Python.
 - This is enabled by default.
- Added "Convert Result to Tunny Log" component
 - Writes to the Tunny log format by inputting variables and objective function values in a specific format.
 - Allows the use of Tunny's analysis features by converting non-Tunny optimization results as well.
- Added support for "Hidden" and "Faint" wire displays in the Tunny Fishing component.
- Added support for LAN Zoo licensing.
- Enhanced samplers due to Optuna update.
 - GP acquisition functions now allow the selection of PI, UCB, and Thompson sampling in addition to EI.
 - Added CMA-ES sampler splitting and the derivative method "CMA-ES with Refinement."
- TunnyDashboard, a new results analysis feature, is now available.



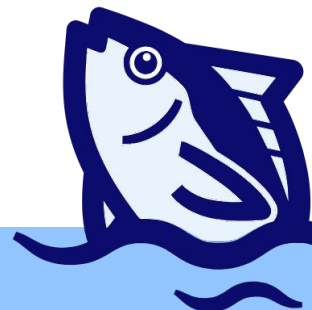
Tunny

The next-gen Grasshopper optimization tool.



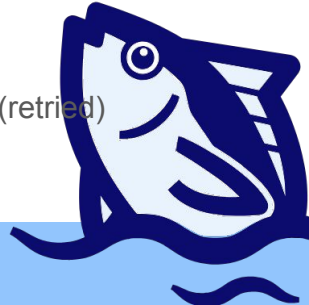
Changes

- NSGA-III splitting parameter default is now automatically calculated.
 - The original default value often resulted in too few divisions.
- Rhino command name change.
 - Renamed the Rhino command TunnyRunDashboard to TunnyRunOptunaDashboard to distinguish it from the newly added "Tunny Dashboard."
- Ribbon group name change.
 - Renamed the "Browser" ribbon group in the Visualize tab to "Dashboard."
- Improved UI responsiveness during optimization execution.
 - Improved UI interaction response during optimization by making progress updates asynchronous.
- Prevented freezing in the version check function.
 - Fixed the new version check process so it does not hang indefinitely when the network connection is slow or unresponsive.
- Optimization of warning display regarding Python 3 components.
 - Changed to suggest enabling "Run in Separate Process" to avoid conflicts.
 - Note: If this option is already enabled, the warning will no longer be displayed.



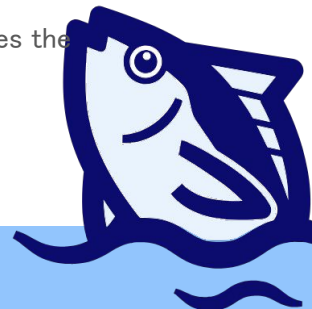
Fixes 1

- Improved Python environment reinstallation behavior on Windows.
 - Improved Python environment reinstallation processing in Windows environments, including user notification when a Rhino restart is required.
- Safe shutdown upon Python environment initialization failure.
 - If initialization fails, Tunny now shuts down normally and recommends reinstalling the Python environment from the application menu.
- Addressed the restriction where Python cannot be restarted within a Rhino session.
 - To address the specification where the Python interpreter cannot be restarted once stopped within the same Rhino session, and to avoid partially initialized states, it now requests a Rhino restart.
- Protection of Python environment installation in used sessions.
 - Since installing after already using Python in the same Rhino session caused environment corruption, this was fixed to avoid installation in this situation and automatically execute installation at the next startup.
- Automatic retry of interrupted/failed installations at the next startup.
 - If installation fails or is interrupted midway, it is no longer treated as completed and will be re-executed (retried) at the next startup.



Fixes 2

- Error detection and notification during Python package installation.
 - Correctly detects and notifies the user of failures during package installation (fixed to prevent false reports of “success” for corrupted environments).
- Reservation of reinstallation when Python runtime cannot be initialized.
 - If the runtime cannot be initialized, automatic reinstallation is scheduled for the next startup.
- Crash avoidance during plot (graph) generation errors.
 - Prevented Rhino from crashing due to errors during plot generation and now displays an error message instead.
- Improvement of worker process error logs.
 - Errors occurring in the worker process used in “Run in Separate Process” are now correctly logged without being overwritten by secondary errors.
- Automatic backup of corrupted configuration files.
 - Instead of silently deleting corrupted configuration files (config), it now creates a backup before deletion and notifies the user.



Fixes 3

- Fix for CMA-ES and Restart CMA-ES sampler operation.
 - Fixed the issue where it stopped working due to upstream Optuna API changes.
- Fix for Population Size in CMA-ES / Restart CMA-ES.
 - Fixed the issue where hardcoded default values were used instead of Optuna's automatic calculation.
- Fixed garbled Japanese characters in Live Chart.
- Fixed Rhino crash when restoring a non-existent Trial ID.
 - Fixed the issue where Rhino would crash when attempting to restore a non-existent Trial ID to Grasshopper.
- Fixed crash during initial startup on Rhino 7 (net48).
 - Fixed the crash that occurred when agreeing to the Terms of Use during the first startup on Rhino 7 (.NET 4.8 environment).

