Claims

1. A computer-implemented method for managing a Robotics Process Automation, RPA, robot, the method comprising:

acquiring data associated with an operation metric of the RPA robot during runtime execution of an automation workflow;

determining an optimising action based on a policy and the acquired data associated with the operation metric of the RPA robot;

wherein determining the optimising action comprises:

analysing the acquired data associated with the operation metric of the RPA robot during runtime execution of the automation workflow based on the policy to predict or determine an error; and

determining the optimising action based on the policy and the results of the analysis;

wherein the optimising action comprises an automatic action to be carried out by the RPA robot corresponding to the results of the analysis.

2. The method according to claim 1, wherein analysing the acquired data associated with the operation of the RPA robot during execution of the automation workflow to predict or determine an error comprises predicting or determining at least one of an error in the execution of the automation workflow by the RPA robot and an operation parameter to be optimised in the execution of the automation workflow by the RPA robot.

3. The method according to claim 2, wherein the predicted or determined error in the execution of the automation workflow by the RPA robot corresponds to an abnormal behaviour in the execution of the automation workflow, wherein the abnormal behaviour comprises at least one of: an unexpected pause or termination of the automation workflow execution, an operation metric of the RPA robot breaching a corresponding threshold, an execution error of the automation workflow, and an unexpected output produced by the automation workflow.

4. The method according to any one of claims 1 to 3, wherein the optimising action further comprises at least one of: a message corresponding to the results of the analysis, an action recommendation corresponding to the results of the analysis.

5. The method according to claim 4, wherein the automatic action comprises at least one of: restarting execution of the automation workflow by the RPA robot, postponing or

stopping the execution of the automation workflow by the RPA robot, changing an element of the environment in which the RPA robot operates, changing an operation parameter of the RPA robot, changing a defining parameter of and/or a stage in the automation workflow, skipping an optional stage in the automation workflow during execution, requesting different allocation of central processing unit, CPU, resources, requesting different allocation of memory resources, requesting extra workload to be performed by the RPA robot, and storing information associated with the results of the analysis.

6. The method according to any one of claims 1 to 5, wherein analysing the acquired data comprises analysing the acquired data using at least one of a deterministic algorithm and a first machine learning model.

7. The method according to any one of the preceding claims, further comprising receiving at least one of: a user input to enable or disable automatic execution of the determined optimising action, a user input to confirm or reject the determined optimising action, a user input to agree or disagree with the predicted or determined error and/or the operation parameter to be optimised, a user input to provide an alternative to the predicted or determined error and/or the operation parameter to be optimised, a user input to agree or disagree with the determined optimising action, a user input to provide an alternative to the determined optimising action, and a user input indicating user feedback subsequent to execution of the optimising action.

8. The method according to any one of the preceding claims, wherein the method further comprises executing the optimising action.

9. The method according to any one of the preceding claims, wherein the policy is a rule-based policy that dictates a corresponding condition for comparison with the operation metric and an action to be carried out based on results of the comparison between the condition and the operation metric.

10. The method according to any one of the preceding claims, wherein the policy dictates an optimisation goal for the RPA robot during execution of the automation workflow, and wherein determining an optimising action is further based on at least one of a deterministic algorithm and a second trained machine learning model.

11. The method according to any one of the preceding claims, wherein acquiring data associated with an operation metric of the RPA robot during execution of an automation

workflow comprises acquiring first data associated with a first session at a runtime resource corresponding to the automation workflow, and wherein the method further comprises:

acquiring second data associated with an operation metric of the RPA robot during execution of the second automation workflow, wherein the second data are associated with a second session at the runtime resource; and

determining an optimising action based on a second policy and the acquired second data.

12. A system for managing performance of a Robotics Process Automation, RPA robot, the system comprising:

an acquiring unit configured to acquire data associated with an operation metric of the RPA robot during runtime execution of an automation workflow; and

a determining unit configured to:

analyse the acquired data associated with the operation metric of the RPA robot during runtime execution of the automation workflow based on a policy to predict or determine an error; and

determine an optimising action based on the policy and the results of the analysis;

wherein the optimising action comprises an automatic action to be carried out by the RPA robot corresponding to the results of the analysis.

13. The system according to claim 12, wherein the system is providable as an external component to the automation workflow.

14. A computer-readable storage medium comprising instructions which, when executed by a computer, cause the computer to carry out the steps of the method of any one of claims 1 to 11.