**Algorithm 1** Data-Fitter

```
1: procedure FITDATA(timeStep, buffer, traceData)
2:     while windowSlideLimit == false do
3:         lastEquationFits ← thresholdEvaluation(lastStackedEQ, buffer)
4:         if lastEquationFits = true then
5:             updateStack(lastFittedEQ, buffer)
6:         else
7:             for i ← 0, buffer.Size() do
8:                 x ← buffer.getKey()                ▷ time unit of simulation
9:                 y ← buffer.getValue()                    ▷ value of variable
10:                observedData.add(x, y)
11:            end for
12:            polynomialEquation ← fitPolynomial(observedData)
13:            exponentialEquation ← fitExponential(observedData)
14:            harmonicEquation ← fitHarmonic(observedData)
15:            expHarmonicEquation ← fitExpHarmonic(observedData)
16:            bestFittedEquation ← minError(polynomialEquation,
17:            exponentialEquation)
18:            harmonicEquation)
19:            expHarmonicEquation)
20:            FittedEquationsList.add(bestFittedEquation)
21:        end if
22:        windowSlideLimit ← slideBuffer(timeStep, traceData)
23:    end while
24: end procedure
```