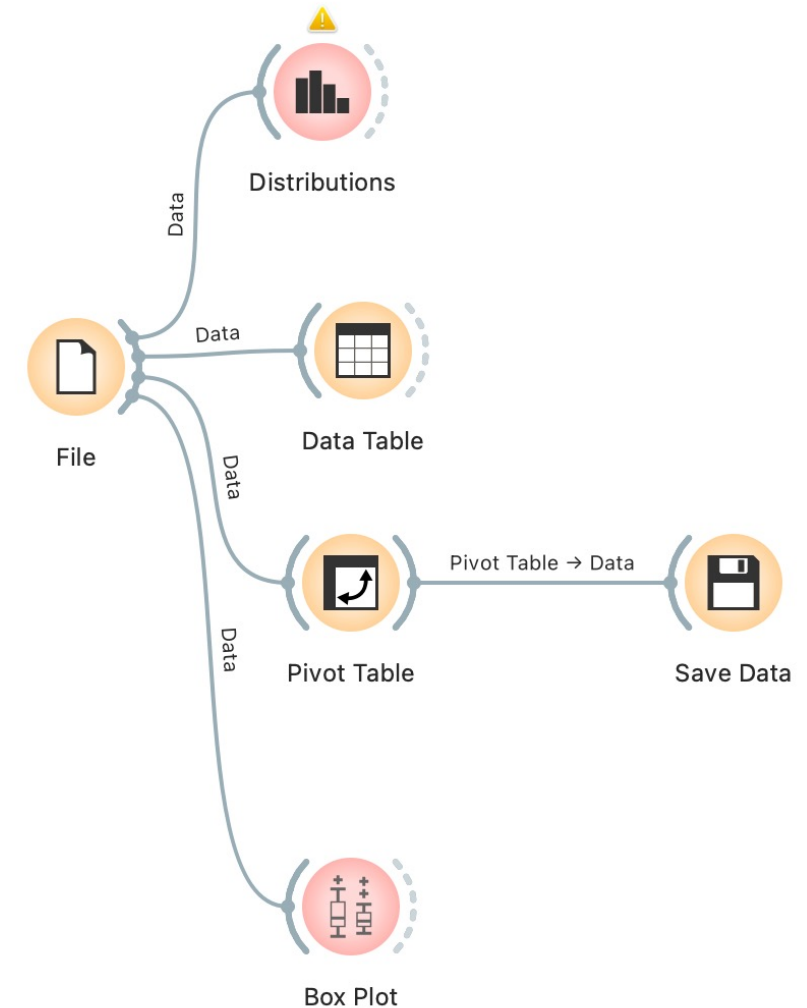


Text Data Mining For Business Decisions

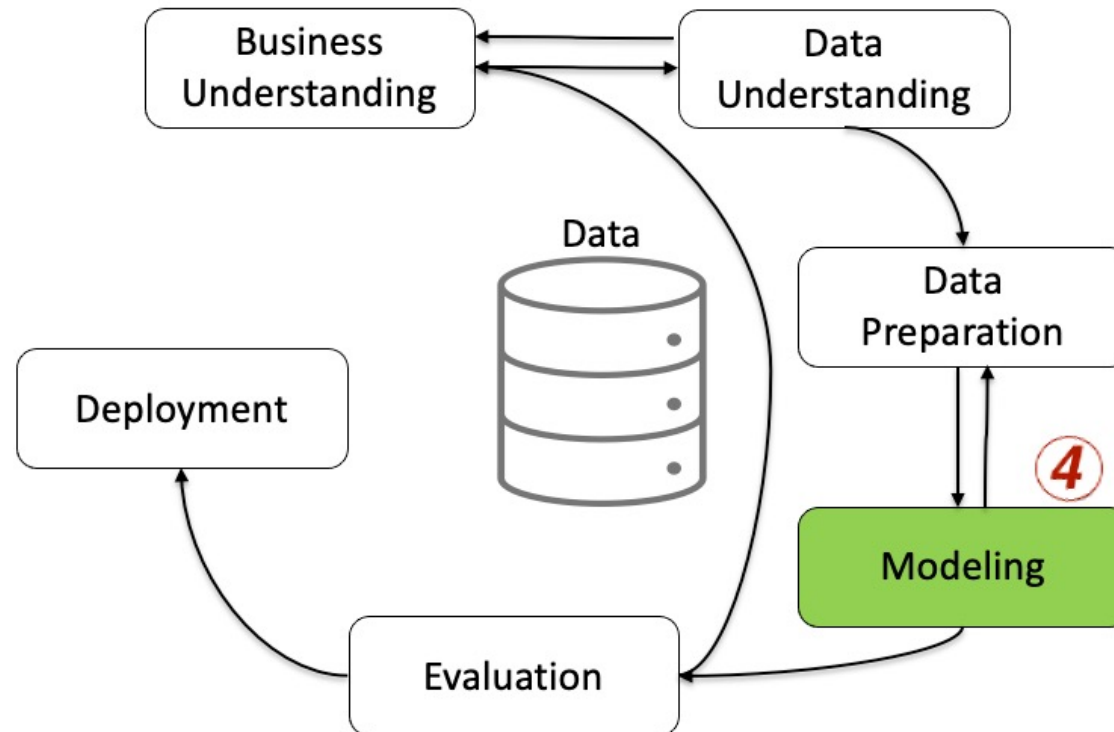
Module 12

Visual Programming A

Data Mining with a Visual Programming Language - Orange



Data Mining- Continuing with Model-Making

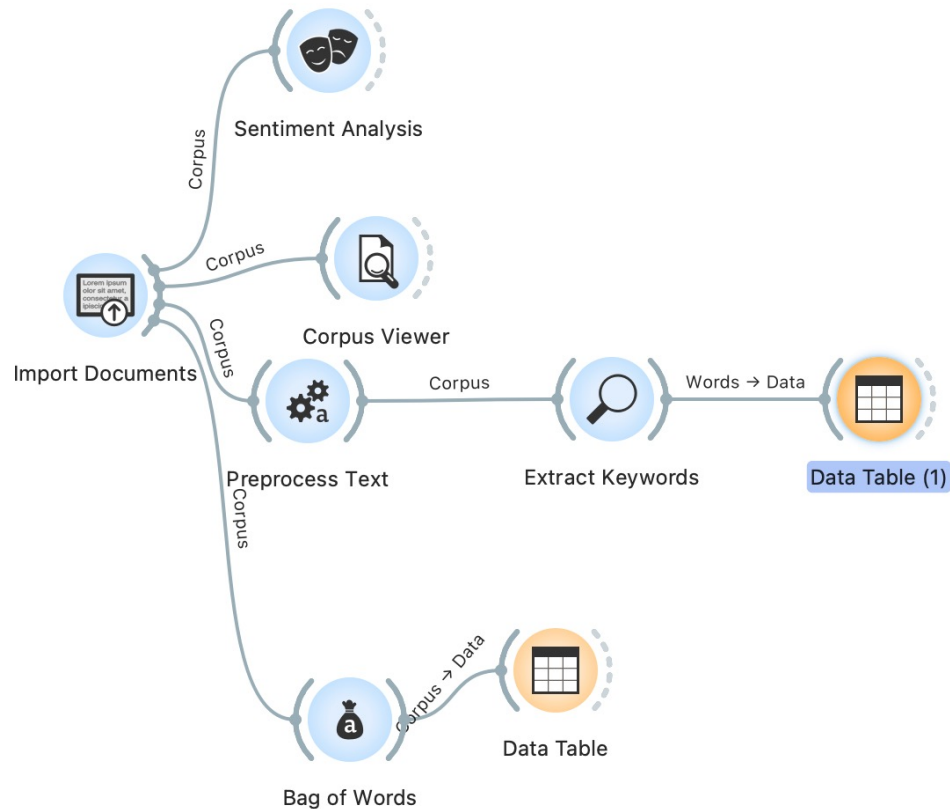


Visual Programming

- **Visual programming** is a type of programming language that lets humans describe processes using illustration.
- Whereas a typical text-based programming language makes the programmer think like a computer, a visual programming language lets the programmer describe the process in terms that make sense to humans.
- Orange - An open-source, visual programming tool for data mining, statistical data analysis, and machine learning

Visual Programming vs. Command Line Code

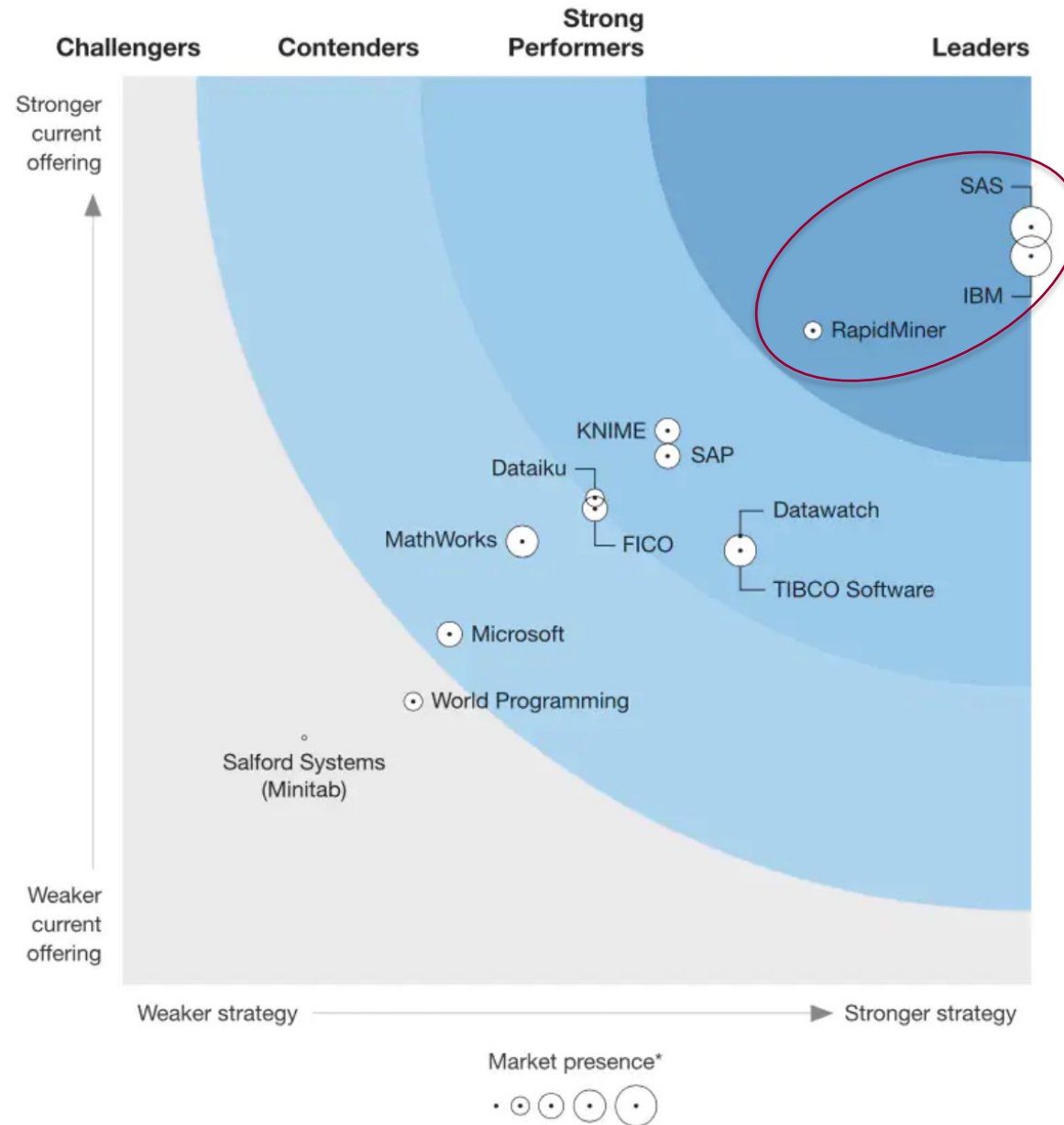
Python Visual Programming



Python Code

```
Solver.py x
1  import math
2
3
4  class Solver:
5
6      def demo(self, a, b, c):
7          d = b ** 2 - 4 * a * c
8          if d > 0:
9              disc: float = math.sqrt(d)
10             root1 = (-b + disc) / (2 * a)
11             root2 = (-b - disc) / (2 * a)
12             return root1, root2
13         elif d == 0:
14             return -b / (2 * a)
15         else:
16             return "This equation has no roots"
17
18
19  if __name__ == '__main__':
20      solver = Solver()
21
22      while True:
23          a = int(input("a: "))
24          b = int(input("b: "))
25          c = int(input("c: "))
26          result = solver.demo(a, b, c)
27          print(result)
```

Visual Programming Environments





Enterprise Guide

SAS Enterprise Guide - EG Capabilities.egg

File Edit View Tasks Program Tools Help

Project Tree

- Other Enhancements
- Autoexec
- OLAP Analysis
 - AdWorks
- Programming Enhancements
 - Programs
 - DIEexample
 - BIExample
- Information Maps and Reports

Other Enhancements

Run Stop Export Schedule Zoom Project Log Properties

PRDSALE Tile Chart SAS Report - Tile Ch...

DEMOGRAPH... Map Chart SAS Report - Map Cha...

EUROPE

Server List

Refresh Disconnect Stop

- Servers
 - SASApp
 - Libraries
 - Files
 - OLAP Servers
 - Private OLAP Servers

BIExample

Program

Save Run Stop Analyze Program Export Send To Create

```
run;

data trend;
input month pn8 pr8 pt8;
format pn8 pr8 pt8 percent0.1;
pn8=pn8-1;
```

Keyword: INPUT
Context: [DATA STEP] INPUT statement
Syntax: INPUT <specification(s)><@|@@>;
Describes the arrangement of values in the input data record and assigns input values to the corresponding SAS variables.

Ready

Connection: SAS Demo User, sasbap.demo.sas.com Functions: Restricted





Views: Design Results Auto Model Find data, operators...etc All Studio Search

Operators

python

- Utility (1)
 - Scripting (1)
 - Execute Python

We found "Keras Extension" in the Marketplace. [Show me!](#)

Repository

+ Add Data

- Samples
- DB
- Local Repository (randalking)
- Cloud Repository (disconnected)

Process

Process

100%

inp

Process Diagram:

- Execute Python (inp, out, out)
- Read Document (fil, out)
- Transform Cases (doc, doc)
- Process Documents (wor, doc, doc, exa, wor)
- WordList to Data (wor, wor, exa)
- Write Database (inp, thr)

res, res

Parameters

Process

- logverbosity: init
- logfile:
- resultfile:
- random seed: 2001
- send mail: never
- encoding: SYSTEM

[Hide advanced parameters](#)

[Change compatibility \(8.1.000\)](#)

Help

Process

RapidMiner Studio Core

Synopsis

The root operator which is the outer most operator of every process.

Description

Each process must contain exactly one

Leverage the Wisdom of Crowds to get operator recommendations based on your process design!

☒ Activate Wisdom of Crowds



Orange Python Visual Programming

