

二変量データの分析

Sub PLOT()

```
MsgBox "散布図を見てみよう"           /*メッセージの出力*/
Worksheets("散布図").Activate           /*ワークシートの”散布図を選ぶ”*/
Call Rinterface.StartRServer             /*R サーバの開始*/
Call Rinterface.PutArray("height", Range("A5:A18")) /*セルにあるデータの読み込み*/
Call Rinterface.PutArray("weight", Range("B5:B18"))
Call Rinterface.RRun("plot(height,weight)") /*プロット*/
Call Rinterface.StopRServer              /*R サーバの終了*/
```

End Sub

Sub CORRELATION()

```
MsgBox "回帰直線と相関係数を計算してみよう"
Worksheets("相関").Activate
Call Rinterface.StartRServer
Range("相関!A4").Value = "height♪"      /*ワークシートの”相関”のセル
                                           A4 に”height♪”を入力*/

Range("相関!B4").Value = "weight♪"
Call Rinterface.PutArray("height", Range("散布図!A5:A18"))
Call Rinterface.PutArray("weight", Range("散布図!B5:B18"))
Call Rinterface.GetArray("height", Range("A5")) /*R サーバにある配列を出力*/
Call Rinterface.GetArray("weight", Range("B5"))
Call Rinterface.RRun("bodylm<-lm(weight ~ height)")
Call Rinterface.RRun("plot(height,weight)")
Call Rinterface.RRun("abline(bodylm)")
Range("相関!A22").Value = "回帰直線を計算した結果:"
Call Rinterface.RRun("sbodylm<-summary(bodylm)")
Call Rinterface.GetArray("sbodylm", Range("A23"))
Call Rinterface.StopRServer
```

End Sub

Sub CreateToolbar()

/*ツールバーの作成*/

```
On Error Resume Next
Dim Tbar As CommandBar
Set Tbar = CommandBars.Add
With Tbar
    .Name = "2変量データの分析"
    .Visible = True
End With

Set NewButn1 = Tbar.Controls.Add(Type:=msoControlButton)
With NewButn1
```

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        .Caption = "  散布図  "
        .Style = msoButtonCaption
        .OnAction = "PLOT"
    End With
    Set NewButn2 = Tbar.Controls.Add(Type:=msoControlButton)
    With NewButn2
        .Caption = "  相 関  "
        .Style = msoButtonCaption
        .OnAction = "CORRELATION"
    End With

End Sub

Sub DestroyToolbar()
    On Error Resume Next
    CommandBars("2変量データの分析").Delete
End Sub

```

iris データの散布図行列&ヒストグラム

```

Private Sub ヒストグラム_Click()
    Call Rinterface.StartRServer
    Call Rinterface.PutDataframe("irisdata", Range("B5:F155"))
    ' Call Rinterface.RRun("library(lattice)")
    ' Call Rinterface.RRun("histogram(~Sepal.Length,data=irisdata)")
    Call Rinterface.RRun("hist(iris$Sepal.Length)")
    ' Call Rinterface.RRun("bb<-by(iris$Sepal.Length,iris$Species,summary)")
    Call Rinterface.RRun("bb<-summary(iris$Sepal.Length)")
    Call Rinterface.GetDataframe("bb", Range("L10"))
    Call Rinterface.StopRServer

End Sub

Private Sub 散布図行列_Click()
    Call Rinterface.StartRServer
    Call Rinterface.PutDataframe("irisdata", Range("B5:F155"))
    Call Rinterface.RRun("plot(irisdata)")
    Call Rinterface.StopRServer

End Sub

```