
```
/*Create a Basic Scatter plot in SAS*/
```

```
proc template;  
define statgraph my_scatter_plot;  
  begingraph;  
    layout overlay;  
    scatterplot x=petallength y=petalwidth;  
  endlayout;  
endgraph;  
end;  
run;  
  
proc sgrender data=sashelp.iris template=my_scatter_plot;  
run;
```

```
/*Add titles to a scatter plot*/
```

```
proc template;  
define statgraph my_scatter_plot;  
  begingraph;  
    entrytitle "Fisher Iris Data";  
    layout overlay;  
    scatterplot x=petallength y=petalwidth;  
  endlayout;  
  entryfootnote "Scatter Plot Created at &timenow on &datenow";  
endgraph;  
end;  
run;
```

```
proc sgrender data=sashelp.iris template=my_scatter_plot;  
run;
```

```
/*Modify X and Y axis*/
```

```
proc template;  
define statgraph my_scatter_plot;  
  begingraph;  
    entrytitle "Fisher Iris Data";  
    layout overlay /  
      xaxisopts = (label="Iris petal length(in mm.)"  
        linearopts=(tickvaluelist=(0 5 10 15 20 25 30 35 40 45 50 55 60 65))  
        gridDisplay=Auto_On)  
      yaxisopts = (label="Iris petal width(in mm.)"  
        linearopts=(tickvaluelist=(0.0 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5 25.0))  
        gridDisplay=Auto_On);  
    scatterplot x=petallength y=petalwidth;  
  endlayout;  
  entryfootnote "Scatter Plot Created at 16:00 on 10/30/2024";  
endgraph;  
end;  
run;
```

```
proc sgrender data=sashelp.iris template=my_scatter_plot;  
run;
```

```
/*Create a grouped scatterplot*/
```

```
proc template;  
define statgraph my_scatter_plot;  
  begingraph;  
    entrytitle "Fisher Iris Data";  
    layout overlay /  
      xaxisopts = (label="Iris petal length(in mm.)"  
        linearopts=(tickvaluelist=(0 5 10 15 20 25 30 35 40 45 50 55 60 65))  
        gridDisplay=Auto_On)  
      yaxisopts = (label="Iris petal width(in mm.)"
```

```

        linearopts=(tickvaluelist=(0.0 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5 25.0))
        gridDisplay=Auto_On);
    scatterplot x=petallength y=petalwidth/
        group=Species markerattrs=(symbol=CircleFilled);
    endlayout;
    entryfootnote "Scatter Plot Created at 16:00 on 10/30/2024";
endgraph;
end;
run;

```

```

proc sgrender data=sashelp.iris template=my_scatter_plot;
run;

```

```

/*Add a legend to scatterplot*/

```

```

proc template;
define statgraph my_scatter_plot;
    begingraph;
        entrytitle "Fisher Iris Data";
        layout overlay /
            xaxisopts = (label="Iris petal length(in mm.)")
                linearopts=(tickvaluelist=(0 5 10 15 20 25 30 35 40 45 50 55 60 65))
                gridDisplay=Auto_On)
            yaxisopts = (label="Iris petal width(in mm.)")
                linearopts=(tickvaluelist=(0.0 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5 25.0))
                gridDisplay=Auto_On);
            scatterplot x=petallength y=petalwidth/
                name="Scatterplot"
                group=Species markerattrs=(symbol=CircleFilled);
            discretelegend "Scatterplot"/
                title="Species: "
                halign=right valign=bottom across=1 location=inside
                opaque=true;
        endlayout;
        entryfootnote "Scatter Plot Created at 16:00 on 10/30/2024";
    endgraph;
end;
run;

```

```

proc sgrender data=sashelp.iris template=my_scatter_plot;
run;

```

```

/*Add confidence interval to scatterplot*/

```

```

proc template;
define statgraph my_scatter_plot;
    begingraph;
        entrytitle "Fisher Iris Data";
        entrytitle "95% confidence interval";
        layout overlay /
            xaxisopts = (label="Iris petal length(in mm.)")
                linearopts=(tickvaluelist=(0 5 10 15 20 25 30 35 40 45 50 55 60 65))
                gridDisplay=Auto_On)
            yaxisopts = (label="Iris petal width(in mm.)")
                linearopts=(tickvaluelist=(0.0 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5 25.0))
                gridDisplay=Auto_On);
            scatterplot x=petallength y=petalwidth/
                name="Scatterplot"
                group=Species markerattrs=(symbol=CircleFilled);
            ellipse x=petallength y=petalwidth /
                group=species
                type=predicted alpha=0.05
                name="p95"
                outlineattrs=graphconfidence;
            discretelegend "Scatterplot"/

```

```
        title="Species: "  
        halign=right valign=bottom across=1 location=inside  
        opaque=true;  
    endlayout;  
    entryfootnote "Scatter Plot Created at 16:00 on 10/30/2024";  
endgraph;  
end;  
run;  
  
proc sgrender data=sashelp.iris template=my_scatter_plot;  
run;
```
