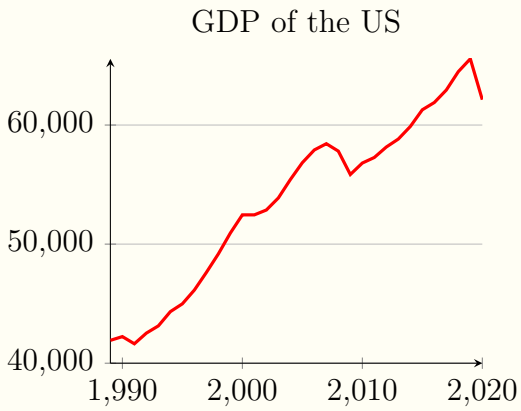
PGFPlots 不同类型的统计图

LaTeX Sparkle · LogCreative

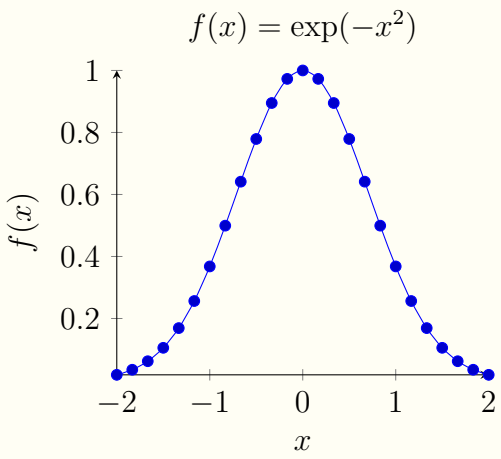
折线图

```
\begin{tikzpicture}
    \begin{axis}[
        axis y line={left},
        axis x line={bottom},
        title={GDP of the US},
        ymin={40000},
        ymajorgrids,
        scaled y ticks=false,
    ]
    \addplot [red,very thick]
    table[col sep=comma]
    {./data/gdppc.csv};
    \end{axis}
\end{tikzpicture}
```



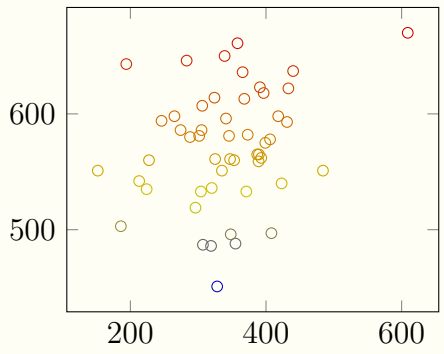
折点图

```
\begin{tikzpicture}
    \begin{axis}[
        smooth,
        axis x line={bottom},
        axis y line={left},
        xlabel={$x$},
        ylabel={$f(x)$},
        title={$f(x)=\exp(-x^2)$},
    ]
     \addplot+
    [mark=*,domain=-2:2]
    {exp(-x^2)};
    \end{axis}
\end{tikzpicture}
```



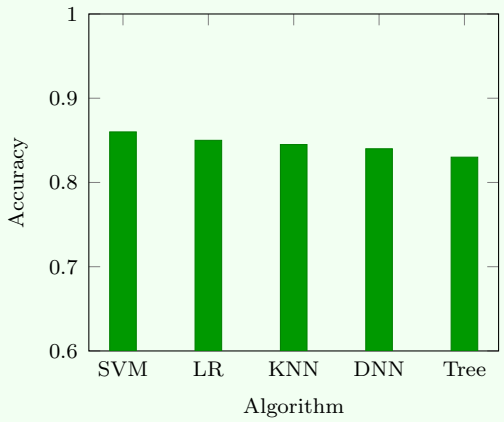
散点图

```
\begin{tikzpicture}
    \begin{axis}[]
     \addplot [
        only marks,
        mark=o,
        scatter
    ] table {./data/scatter.dat};
    \end{axis}
\end{tikzpicture}
```



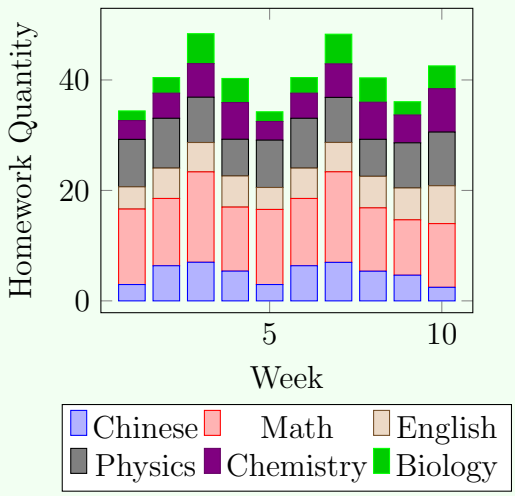
柱状图

```
\begin{tikzpicture}
    \begin{axis}[
    font={\scriptsize},
    ymin={0.6},
    ymax={1},
    ylabel={Accuracy},
    xlabel={Algorithm},
    symbolic x
    coords={SVM,LR,KNN,DNN,Tree},
    width=7cm,
    ]
     \addplot [ybar,
    green!50!black,
    fill=green!60!black]
    coordinates {(SVM,0.86)
    (LR,0.85) (KNN,0.845)
    (DNN,0.84) (Tree,0.83)};
    \end{axis}
\end{tikzpicture}
```



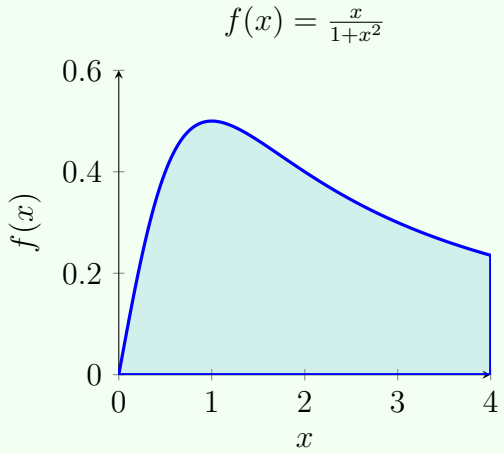
堆积柱形图

```
\pgfplotstableread [
    col sep=comma]
    {./data/quantity.csv}
    {\quantity}
\begin{tikzpicture}
    \begin{axis}[
    font={\normalsize},
    ybar stacked,
    xlabel={Week},
    ylabel={Homework Quantity},
    legend style={
        at={(0.5,-0.3)},
        anchor=north,
        legend columns=3
    },
    ]
    \foreach \y in {1,...,6}
        \addplot+ table[x
    index=0,y index=\y]
    {\quantity};
    \legend{Chinese, Math,
    English, Physics, Chemistry,
    Biology};
    \end{axis}
\end{tikzpicture}
```



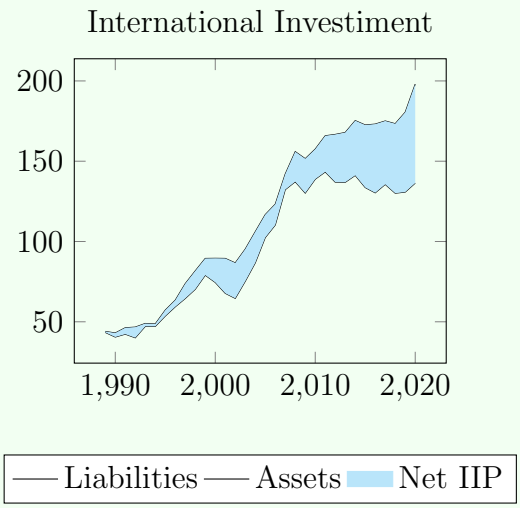
面积图

```
\begin{tikzpicture}
    \begin{axis}[
    title={$f(x) =
    \frac{x}{1+x^2}$},
    axis x line={bottom},
    axis y line={left},
    xlabel={$x$},
    ylabel={$f(x)$},
    ymax=0.6,
    ]
     \addplot
    [samples=200,domain=0:4,blue,very
    thick,fill=GnBu-H,fill
    opacity=0.2] {x/(1+x^2)}
    \closedcycle;
    \end{axis}
\end{tikzpicture}
```



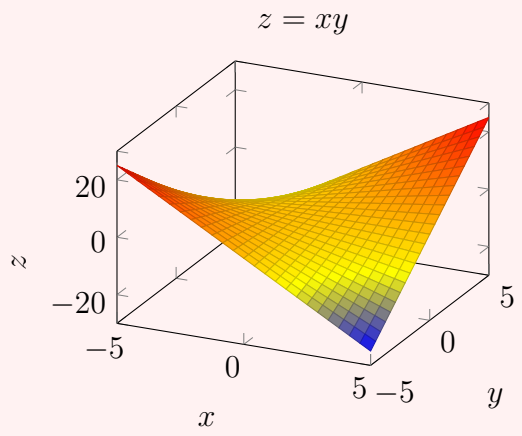
间隙面积图

```
\begin{tikzpicture}
\begin{axis}[fill between/on
    layer={main},legend style={
        at={(0.5,-0.3)},
        anchor=north,
        legend columns=3
},
title={International Investiment},
]
 \addplot [name path=F] table[col
    sep=comma,x=year,y=Liab]
    {./data/iip.csv};
 \addplot [name path=G] table[col
    sep=comma,x=year,y=Assets]
    {./data/iip.csv};
 \addplot[color=cyan!25!white]
    fill between[of=F and G];
 \legend{Liabilities, Assets, Net
    IIP};
\end{axis}
\end{tikzpicture}
```



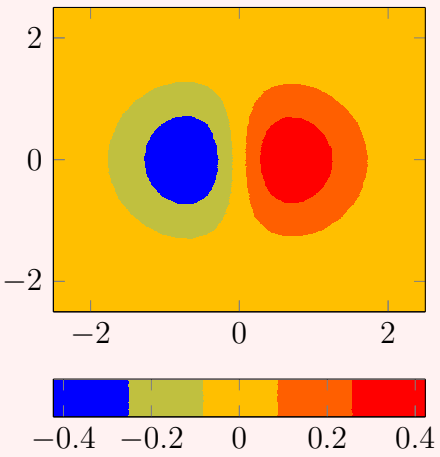
曲面图

```
\begin{tikzpicture}
    \begin{axis}[title={$z=xy$},
    xlabel={$x$},
    ylabel={$y$},
    zlabel={$z$},
    ]
     \addplot3 [surf] {x*y};
    \end{axis}
\end{tikzpicture}
```



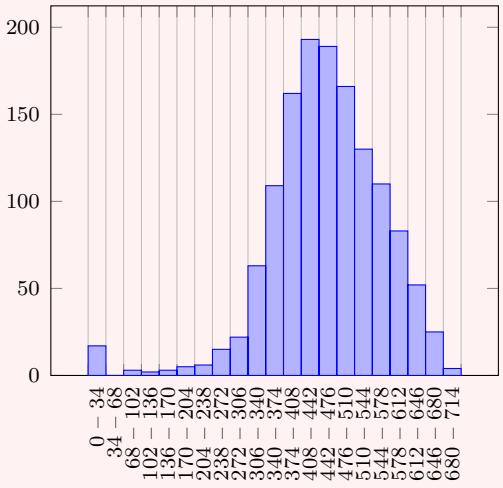
等高图

```
\begin{tikzpicture}
    \begin{axis}[
        contour filled,
        view={0}{90},
        colorbar horizontal,
    ]
     \addplot3 [domain=-2.5:2.5]
    {exp(-x^2-y^2)*x};
    \end{axis}
\end{tikzpicture}
```



直方图

```
\begin{tikzpicture}
\begin{axis}[
    ybar interval,
    ymin=0,
    xtick=data,
    xticklabel interval
    boundaries,
    x tick label style={
        rotate=90,
        anchor=east,
    },
    tick align=inside,
    width=7.5cm,
    font=\scriptsize,
    ]
    \addplot coordinates {
    (0,17) (34,0) (68,3) (102,2)
    (136,3) (170,5) (204,6)
    (238,15) (272,22) (306,63)
    (340,109) (374,162) (408,193)
    (442,189) (476,166) (510,130)
    (544,110) (578,83) (612,52)
    (646,25) (680,4) (714,4)
    };
    \end{axis}
\end{tikzpicture}
```



箱式图

```
\begin{tikzpicture}
    \begin{axis}[
    boxplot/draw direction=y,
    ]
    \addplot+ [boxplot prepared={
    lower whisker=2.5, lower
    quartile=4,
    median=8.5, upper quartile=12,
    upper whisker=15},
    ] coordinates {};
    \addplot+ [boxplot prepared={
    lower whisker=2.5, lower
    quartile=4,
    median=8.5, upper quartile=12,
    upper whisker=15},
    ] coordinates {};
    \end{axis}
\end{tikzpicture}
```