

UW CSE 190p Section

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Before We Start

- Create and remember save every code and steps you try today!
- If you have any question about today's material, email your report to TA.

Outlines

- Visualization: plot

Plot Basics

- Line

- Color

- b : blue
 - g : green
 - r : red
 - c : cyan
 - m : magenta
 - y : yellow
 - k : black
 - w : white

- Width

- Marker

Plot Setting

```
plt.plot(t, f(t), color='r', linewidth=2.0)
```

```
plt.setp(lines, color='r', linewidth=2.0)
```

```
plt.setp(lines, 'color', 'r', 'linewidth', 2.0)
```

Plot Basic Exercise

- Plot $(x-2)^2-10$, $-10 < x < 10$, line color red, dashed line, line width 3.0
- Plot again using green triangular markers, step the marker by 1.5

Plot Basics

- Line graph
- Bar graph
- Scatter plot

Figure Attribute

- Axis
- Grid
- Label
- Title
- Figure
 - Multiple figures
 - Multiple plots in the same graph
 - Multiple graphs in the same figure, i.e., subplots

Exercise

- Scatter plot of random 100 points between $x:[0,1]$ and $y:[5,7]$
- Make the axis between $x:[-0.5,1.5]$ and $y:[4.5,7.5]$
- Add dotted grid, step by 0.5
- Add title as “Random Scatter”

Legends, Labels, Decorations

- Legend
- Text
- Annotation

Exercise

$x = [1, 2, 3, 4, 5, 6]$

$y1 = [1675, 2979, 4356, 3432, 6851, 5245]$

$y2 = [3163, 4198, 7021, 2134, 2338, 4598]$

- Create figure, plot in two separate plots
- Create a new figure, plot both in one
- Add max annotations of $y1$ and $y2$
- Add legend, xlabel "Year", ylabel "Earning"

Questions?

Homework/Quiz Questions?