

COS30045: Task from week 1 to week 3

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Task 1.1

Title of Article about Interesting Visualisation

Author of Interesting Article

A report from Animal Medicines Australia (AMA) has found that many Australians took the opportunity to introduce a pet into their household during the pandemic. Their survey indicated that there was a significant increase in the percent of households taking in a new dog, fish or bird. Their research also indicated that pets had a number of positive influences on their lives such as:

- companionship
- better mental health
- joy and happiness.

Pet ownership in Australia, 2019 vs 2021								
Pet type	Household penetration (%)		Total owner households ('000)		Animals per household (average)		Total pets ('000)	
	2019	2021	2019	2021	2019	2021	2019	2021
Dogs	40	47 	3,848.2	4,644.6	1.3	1.4	5,104.7	6,344.3
Cats	27	30	2,602.4	3,030.7	1.4	1.6	3,766.6	4,903.3
Fish	11	13 	1,056.8	1,314.5	10.7	8.5	11,331.7	11,186.5
Birds	9	14 	867.9	1,384.0	6.4	3.9	5,569.4	5,448.4
Small mammals	3	5	257.8	498.9	2.4	3.0	614.5	1,502.0
Reptiles	2	4	194.5	426.4	1.9	1.6	364.2	663.4
Other pets	2	1	194.8	118.6	9.2	3.4	1,785.3	401.2
Pet Owners	61	69 	5.9 m	6.8 m			28.5 m	30.4 m
Non-Owners	39	31 	3.7 m	3.1 m				

Fig 1. Comparison of Pet Ownership in 2019. Data source: [Animal Medicines Australia Report](#)

With the increase in pet ownership the AMA are encouraging policy makers to consider the needs of companion animals and their owners when considering rental, strata and body corporate regulations as well as accepting animals in public places and transport.

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Toan Nguyen

Fig 1: Task 1.1 Output

```

1 <!DOCTYPE html>
2 <html lang="en">
3
4 <head>
5   <meta charset="UTF-8"/>
6   <meta name="description" content="Data Visualisation Exercise 1"/>
7   <meta name="keywords" content="HTML, CSS"/>
8   <meta name="author" content="Your name here"/>
9
10  <title>Task 1.1 HTML and CSS Demo Page</title>
11  <!--Insert description of exercise -->
12
13  <style>
14    .task1 {
15      width: 50%;
16      height: auto;
17      display: block;
18      margin-left: auto;
19      margin-right: auto;
20    }
21    .task1 img{
22      width: 100%;
23      height: auto;
24    }
25  </style>
26
27 </head>
28
29 <body>
30
31  <h1>Title of Article about Interesting Visualisation</h1>
32  <h2>Author of Interesting Article</h2>
33
34  <p>
35    A report from Animal Medicines Australia (AMA) has found that many Australians took
36    the opportunity to introduce a pet into their household during the pandemic. Their survey
37    indicated that there was a significant increase in the percent of households taking in a new dog, fish or bird.
38    Their research also indicated that pets had a number of positive influences on their lives such as:
39  </p>
40
41  <ul>
42    <li>companionship</li>
43    <li>better mental health</li>
44    <li>joy and happiness.</li>
45  </ul>
46
47  <br>
48
49  <div class = task1>
50  <figure>
51    
52    <figcaption>Fig 1.Comparison of Pet Ownership in 2019. Data source: <a href=
53    "https://animalmedicinesaustralia.org.au/wp-content/uploads/2021/08/AMAU005-PATP-Report21_v1.41_WEB.pdf"
54    >Animal Medicines Australia Report</a></figcaption>
55  </figure>
56
57  </div>
58
59  <p>
60    With the increase in pet ownership the AMA are encouraging policy makers to consider
61    the needs of companion animals and their owners when considering rental, strata and
62    body corporate regulations are well as accepting animals in public places and transport.
63  </p>
64
65  <footer style = "color:grey"> COS30045 Data Visualisation<br>Toan Nguyen</footer>
66
67 </body>
68 </html>

```

Fig 2: Task 1.1 HTML code

## Task 1.2

### Title of Article about Interesting Visualisation

#### Author of Interesting Article

A report from Animal Medicines Australia (AMA) has found that many Australians took the opportunity to introduce a pet into their household during the pandemic. Their survey indicated that there was a significant increase in the percent of households taking in a new dog, fish or bird. Their research also indicated that pets had a number of positive influences on their lives such as:

- companionship
- better mental health
- joy and happiness.

Figure 1: Percent of most popular pet owned by Australians in 2019. Data Source: [Animal Medicines Australia Report](#)

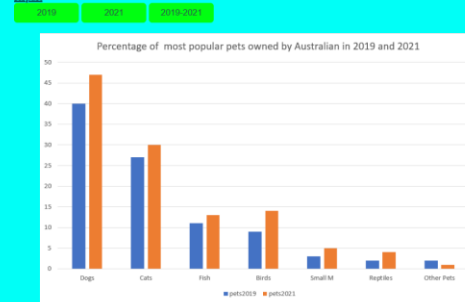


Fig 3: Percent of most popular pets owned by Australians in 2019 and 2021.

With the increase in pet ownership the AMA are encouraging policy makers to consider the needs of companion animals and their owners when considering rental, strata and body corporate regulations as well as accepting animals in public places and transport.

Fig 3: Task 1.2 Output

```

1 <!DOCTYPE html>
2 <html lang="en">
3
4 <head>
5   <meta charset="UTF-8"/>
6   <meta name="description" content="Data Visualisation Exercise 1"/>
7   <meta name="keywords" content="HTML, CSS"/>
8   <meta name="author" content="Your name here"/>
9   <link rel="stylesheet" href="styles.css" />
10  <title>Task 1.1 HTML and CSS Demo Page</title>
11  <!--Insert description of exercise -->
12  <script src="1.2.js"></script>
13  <style>
14
15  </style>
16
17 </head>
18
19 <body>
20
21  <h1>Title of Article about Interesting Visualisation</h1>
22  <h2>Author of Interesting Articles</h2>
23
24  <p>
25    A report from Animal Medicines Australia (AMA) has found that many Australians took
26    the opportunity to introduce a pet into their household during the pandemic. Their survey
27    indicated that there was a significant increase in the percent of households taking in a new dog, fish or bird.
28    Their research also indicated that pets had a number of positive influences on their lives such as:
29  </p>
30
31  <ul>
32    <li>companionship</li>
33    <li>better mental health</li>
34    <li>joy and happiness.</li>
35  </ul>
36
37
38  <br>
39
40  <div class = task1>
41    <!-- 
42    <br>Fig 1.Comparison of Pet Ownership in 2019. Data source: <a href="https://animalmedicinesaustralia.org.au/wp-content/uploads/2021/08/AMAU005-PATP-Report21_v1.41_WEB.pdf">Animal Medicines Australia Report</a> -->
43    <caption class="table-caption">
44      Figure 1: Percent of most popular pet owned by Australians in 2019. Data Source: <a href="https://animalmedicinesaustralia.org.au/wp-content/uploads/2021/08/AMAU005-PATP-Report21_v1.41_WEB.pdf">
45      >Animal Medicines Australia Report</a><br></caption>
46      <tr>
47        <td>
48          <button id="2019" onclick="year2019()">2019</button>
49          <button id="2021" onclick="year2021()">2021</button>
50          <button id="2019-2021" onclick="bothyear()">2019-2021</button>
51        </td>
52      </tr>
53    </table>
54    <p></p>
55    <figcaption id="figcap">
56      Fig 3. Percent of most popular pets owned by Australians in 2019 and 2021.</figcaption>
57    </figure>
58  </div>
59
60  <div>
61
62  </div>
63
64  <p>
65    With the increase in pet ownership the AMA are encouraging policy makers to consider the needs of companion animals and their owners when considering rental, strata and body corporate regulations are well as accepting animals in public places and transport.
66  </p>
67
68  <footer style = "color:grey"> COS30045 Data Visualisation<br>Toan Nguyen</footer>
69
70
71 </body>
72 </html>
73

```

Fig 4: Task 1.2 HTML code

```

1 function year2019() {
2     document.getElementById('theimg').src = '1.2-2019.png';
3     document.getElementById('figcap').innerHTML =
4     "Fig 1. Percent of most popular pets owned by Australians in 2019."
5 }
6 function year2021() {
7     document.getElementById('theimg').src = '1.2-2021.png';
8     document.getElementById('figcap').innerHTML =
9     "Fig 2. Percent of most popular pets owned by Australians in 2021."
10 }
11 function bothyear() {
12     document.getElementById('theimg').src = '1.2-2019-2021.png';
13     document.getElementById('figcap').innerHTML =
14     "Fig 3. Percent of most popular pets owned by Australians in 2019 and 2021."
15 }

```

Fig 5: Task 1.2 JS code

## Task 1.3

### Drawing Shapes with SVG



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Fig 6: Task 1.3 Output

```

1 <!DOCTYPE html>
2 <html lang = "en">
3 <head>
4   <meta charset = "utf-8" />
5   <meta name = "description" content = "Data Visualisation"/>
6   <meta name = "keywords" content = "HTML,CSS,D3" />
7   <meta name = "author" content = "Toan Nguyen" />
8
9   <title> Task 1.3 Drawing with data</title>
10 </head>
11
12 <body>
13   <h1> Drawing Shapes with SVG </h1>
14
15   <svg width = "500" height = "500">
16     <circle cx = "25", cy = "25", r = "25", fill = "cornflowerblue"/>
17     <rect x = "50", y = "50", width = "20", height = "30", fill = "orange"/>
18   </svg>
19
20   <br>
21   <b>
22     <footer style = "color:grey"> COS30045 Data Visualisation<br>
23     Toan Nguyen</footer>
24   </body>
25
26 </html>

```

Fig 7: Task 1.3 HTML code

## Task 2.1

# The D3 Journey Start Here

Warning: Toan played games 14 times a day. Please take a rest!

Toan played games 5 times a day.

Warning: Toan played games 26 times a day. Please take a rest!

Warning: Toan played games 23 times a day. Please take a rest!

Toan played games 9 times a day.

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Fig 8: Task 2.1 Output

```

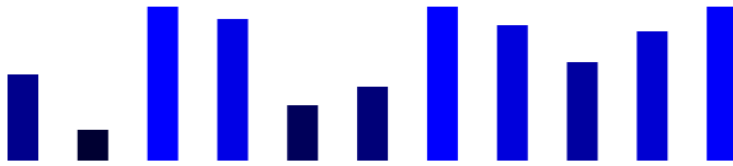
1  <!DOCTYPE html>
2  <html lang = "en">
3  <head>
4      <meta charset = "utf-8" />
5      <meta name = "description" content = "Data Visualisation"/>
6      <meta name = "keywords" content = "HTML,CSS,D3" />
7      <meta name = "author" content = "Toan Nguyen" />
8
9      <title> Task 2.1 D3 Data Binding</title>
10
11      <script src = "https://d3js.org/d3.v7.min.js" ></script>
12  </head>
13
14  <body>
15      <h1> The D3 Journey Start Here </h1>
16
17      <script>
18          var dataset = [14,5,26,23,9]
19
20          d3.select("body").selectAll("p") //Select all paragraphs "p" in the body element
21              .data(dataset) //This count the elements in the dataset
22              .enter() // Create a placeholder for each element in the dataset
23              .append("p") // Append "p" to each place holder of the dataset
24              .text(function(d,t){
25                  var warning = "";
26                  var advise = "";
27                  if (d > 10)
28                  {
29                      warning = "Warning: ";
30                      advise = " Please take a rest!";
31                  }
32                  return warning + "Toan played games " +d+ " times a day." +advise
33              };
34          //Anonymous function that takes value from the dataset as inputs and loop through each value
35          });
36      </script>
37
38      <br>
39      <bf>
40      <footer style = "color:grey"> COS30045 Data Visualisation<br>
41      Toan Nguyen</footer>
42  </body>
43 </html>

```

Fig 9: Task 2.1 HTML code

## Task 2.2

# The D3 Journey Start Here



COS30045 Data Visualisation  
Toan Nguyen

Fig 10: Task 2.2 Output

```
1 <!DOCTYPE html>
2 <html lang = "en">
3 <head>
4   <meta charset = "utf-8" />
5   <meta name = "description" content = "Data Visualisation"/>
6   <meta name = "keywords" content = "HTML,CSS,D3" />
7   <meta name = "author" content = "Toan Nguyen" />
8
9   <title> Task 2.2 Drawing with data</title>
10
11   <script src = "https://d3js.org/d3.v7.min.js" ></script>
12 </head>
13
14 <body>
15   <h1> The D3 Journey Start Here </h1>
16
17   <script>
18     var w = 500;
19     var h = 100;
20
21     var dataset = [14,5,26,23,9,12,28,22,16,25]
22
23     var svg = d3.select("body")           //Select the body of the document
24       .append("svg")                     //append the svg to the the element "body"
25       .attr("height",h)                  //svg's height
26       .attr("width", w);                 //svg's width
27
28     svg.selectAll("rect")                //select all rectangles
29       .data(dataset)                     //count and prepare dataset
30       .enter()                           //create the space holder for the dataset
31       .append("rect")
32       .attr("x", function(d,i) {
33         return i *(w / dataset.length);
34       })
35       .attr("y", function(d,i) {
36         return (h - d*4)}})
37       .attr("width", 20)
38       .attr("height", function(d){
39         return d*4;
40       })
41       .attr("fill", function(d){
42         return "rgb(0,0, " + Math.round(d*10) + ")";
43       });
44
45   </script>
46
47   <br>
48   <bf>
49   <footer style = "color:grey"> COS30045 Data Visualisation<br>
50   Toan Nguyen</footer>
51 </body>
52
53
54 </html>
```

Fig 11: Task 2.2 HTML code



## Task 2.3

# The D3 Journey Start Here

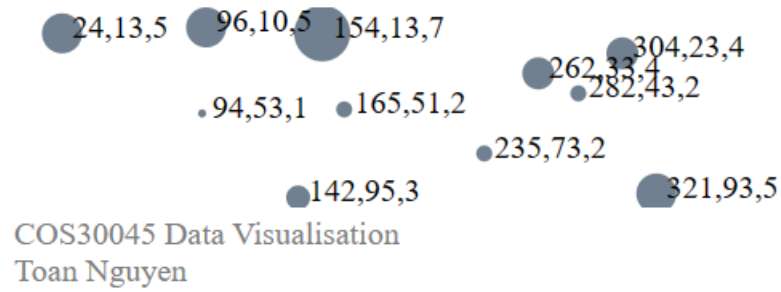


Fig 12: Task 2.3 Output

```

1 <!DOCTYPE html>
2 <html lang = "en">
3 <head>
4   <meta charset = "utf-8" />
5   <meta name = "description" content = "Data Visualisation"/>
6   <meta name = "keywords" content = "HTML,CSS,D3" />
7   <meta name = "author" content = "Toan Nguyen" />
8
9   <title> Task 2.2 Drawing with data</title>
10
11   <script src = "https://d3js.org/d3.v7.min.js" ></script>
12 </head>
13
14 <body>
15   <h1> The D3 Journey Start Here </h1>
16
17   <script>
18     var w = 500;
19     var h = 100;
20
21     var dataset = [
22       [142,95,3],
23       [262,33,4],
24       [94,53,1],
25       [282,43,2],
26       [165,51,2],
27       [96,10,5],
28       [24,13,5],
29       [304,23,4],
30       [154,13,7],
31       [321,93,5],
32       [235,73,2]
33     ];
34
35     var svg = d3.select("body")           //Select the body of the document
36       .append("svg")                     //append the svg to the element "body"
37       .attr("height",h)                  //svg's height
38       .attr("width", w);                 //svg's width
39
40     svg.selectAll("circle")              //select all rectangles
41       .data(dataset)                     //count and prepare dataset
42       .enter()                           //create the space holder for the dataset
43       .append("circle")
44       .attr("cx", function(d,i) {
45         return d[0];
46       })
47       .attr("cy", function(d) {
48         return d[1];
49       })
50       .attr("r", function(d) {
51         return d[2]*2;
52       })
53       .attr("fill", "slategray");
54     ;
55
56     svg.selectAll("text")
57       .data(dataset)
58       .enter()
59       .append("text")
60       .text(function(d){
61         return d[0] + "," + d[1] + "," + d[2];
62       })
63       .attr("x", function(d){
64         return d[0]+5;
65       })
66       .attr("y", function(d) {
67         return d[1]+2;
68       })
69     ;
70
71   </script>
72
73   <br>
74   <bf>
75   <footer style = "color:grey"> COS30045 Data Visualisation<br>
76     Toan Nguyen</footer>
77 </body>
78 </html>

```

Fig 12: Task 2.3 HTML code

## Task 2.4

# The D3 Journey Start Here

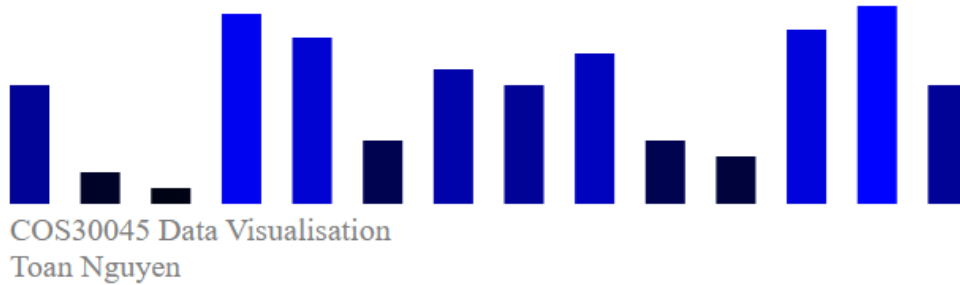


Fig 13: Task 2.4 Output

```
1 <!DOCTYPE html>
2 <html lang = "en">
3 <head>
4   <meta charset = "utf-8" />
5   <meta name = "description" content = "Data Visualisation"/>
6   <meta name = "keywords" content = "HTML,CSS,D3" />
7   <meta name = "author" content = "Toan Nguyen" />
8
9   <title> Task 2.4 Drawing with data</title>
10
11   <script src = "https://d3js.org/d3.v7.min.js" ></script>
12
13 </head>
14
15 <body>
16   <h1> The D3 Journey Start Here </h1>
17
18   <script src="2.4_script.js"></script>
19
20   <br>
21   <bf>
22   <footer style = "color:grey"> COS30045 Data Visualisation<br>
23   Toan Nguyen</footer>
24 </body>
25
26 </html>
```

Fig 14: Task 2.4 HTML code

```

1
2 var w = 500;
3 var h = 100;
4
5 var svg = d3.select("body")           //Select the body of the document
6   .append("svg")                     //append the svg to the the element "body"
7   .attr("height",h)                  //svg's height
8   .attr("width", w);                 //svg's width
9
10 d3.csv("2.4_data.csv").then(function(data) {
11   console.log(data);
12   wombatSightings = data;
13   barChart(wombatSightings);
14 });
15
16 function barChart(dataset){
17   // data(dataset)                      //count and prepare dataset
18   svg.selectAll("rect")                //select all rectangles
19   .data(dataset)                       //count and prepare dataset
20   .enter()                             //create the space holder for the dataset
21   .append("rect")
22   .attr("x", function(d,i) {
23     return i *(w / dataset.length);
24   })
25   .attr("y", function(d) {
26     return (h - d.wombats*4)}))
27   .attr("width", 20)
28   .attr("height", function(d){
29     return d.wombats*4;
30   })
31   .attr("fill", function(d){
32     return "rgb(0,3, " + Math.round(d.wombats*10) + ")";
33   });
34 }
35
36

```

Fig 15: Task 2.4 JS code