Errata for *Python Playground* (updated to 6th printing)

Page 19: The first sentence that reads:

Let's begin by considering that the equation used to describe a circle with radius *r*, centered at the origin of a two-dimensional plane, is.

should now read:

Let's begin by considering that the equation used to describe a circle with radius *r*, centered at the origin of a two-dimensional plane, is $x^2 + y^2 = r^2$.

and the formula which reads:

$y = b + r \cos(\theta)$

should now read:

$y = b + r \sin(\theta)$

Page 20: In Figure 2-3, the angle theta (θ) should be between the x-axis and the segment *C*, rather than the segment *P*.

and the formula for *y* that reads:

$$y = R\left((1-k)\sin(\theta) + lk\sin\left(\frac{1-k}{k}\theta\right)\right)$$

should now read:

$$y = R\left((1-k)\sin(\theta) - lk\sin\left(\frac{1-k}{k}\theta\right)\right)$$

Page 47: In the third line of the last code block, `argumentss` should now read `arguments`

Page 58: In the fourth sentence of the second paragraph, "step 1" should now read "step 2"

Page 61: The penultimate line of the final code block that reads:

```
>>> print d
```
should now read:
```
>>> print(d)
```

Page 62: The line labeled with number ball (4) that reads:
```
avg = 0.996*0.5*(buf[0] + buf[1])
```
should now read:
```
avg = 0.995*0.5*(buf[0] + buf[1])
```

Page 64: In the second line of the code block, `Karplus String` should now read
`Karplus-Strong`

Page 65: In the third full paragraph, `-play` should now read `--play`

Page 67: In the eighth line of the code block, `Karplus String` should now read
`Karplus-Strong`

Page 68: In the second code block, `-display` should now read `--display`

Page 69: In the code block, the line that reads:
```
$ python ks.py -play
```
should now read:
```
$ python3 ks.py --play
```

and the first sentence of step 3 that reads:
Add a `--piano` command line option to the project.
should now read:
Modify the `--piano` command line option for the project.

Page 73: The penultimate sentence on the page that reads:
If you draw a line from the origin to a point on this circle, it becomes a unit vector that depends on the angle *A*.

should now read:
If you draw a line from the origin to a point on this circle, it becomes a unit vector that depends on the angle *t*.

Page 78: On both the third and seventh lines of the code block, `distMatrix` should now read `self.distMatrix`

and on the eleventh line of the code block, the line:
`vel += vel2;`
should now read:
`vel += vel2`

Page 83: The line in the `applyRules(self)` function that reads:
`vel += vel2;`
should now read:
`vel += vel2`

Page 124: The first sentence of the first paragraph which currently reads:
At (1), you perform a sanity check to ensure that the depth map and the image have the same dimensions.
should now read:
At (1), you convert the depth map into a single channel image if needed.

and in the first sentence of the second paragraph, `Image.Load()` should now read `Image.load()`

Page 128: In the final code block, `-tile` should now read `--tile`

Page 138: The last sentence before the equation that reads:
See how the matrix multiplication translates a point (x, y, z, 1.0) to ($x + tx$, $y + ty$, $z + tz$, 1.0).
should now use subscripts, to read:
See how the matrix multiplication translates a point (x, y, z, 1.0) to ($x + t_x$, $y + t_y$, $z + t_z$, 1.0).

Page 150: We deleted the line labeled with number ball (1), and moved the number ball (1) label to the line: `in vec2 vTexCoord;`

and the sentence following the code block, that currently reads:
Starting at (1), you define inputs to the fragment shader—the same color and texture coordinate variables you set as output in the vertex shader.
should now read:
Starting at (1), you define inputs to the fragment shader—the same texture coordinate variable you set as output in the vertex shader.

Page 156: The code block that currently reads:

```
$python simpleglfw.py
```

should now read:

```
$python3 simpleglfw.py
```

Page 163: The second equation, which currently reads:

```
V = (cos(θ)sin(ϕ),sin(θ)sin(ϕ),cos(ϕ))
```

should now read:

```
V = (cos(ϕ)sin(θ),sin(ϕ)sin(θ),cos(θ))
```

Page 168: In the sentence following the first code block, –1 should not be a subscript.

Page 171: The line labeled with number ball (1) in the code block that reads:

```
vec4 texCol = texture2D(uSampler, vec2(vTexCoord.s, vTexCoord.t));
```

should now read:

```
vec4 texCol = texture(uSampler, vec2(vTexCoord.s, vTexCoord.t));
```

Page 186: In the third sentence, “0.1 seconds” should now read “0.01 seconds”