Python-pptx

Programmatically creating slide decks
Python-pptx

- Package in Python that allows for the programmatic creation of slide decks
- Creates slides using slide layouts in a slide master
- This presentation was created entirely using a slide master and python-pptx
Why use Python-pptx?

- Excellent tool for automated creation of repetitive slides with similar formatting (e.g. 25 slides of bar charts)
- Create multiple slide decks with no scale-up (e.g. focus group results from different sites)
- Easily update slide decks that must be created every year (e.g. longitudinal research)
- Edit formatting automatically when changes need to be made (e.g. change the data labels for all bar charts in presentation)
Creating content

- Layouts are imported from the slide master of an existing PowerPoint presentation.
  - If no PowerPoint presentation is specified, the package supplies a default layout.

- Layouts contain placeholders that may be pre-formatted to a certain degree in the slide master. You can insert content directly into a placeholder.

- Alternately, content can be inserted into a slide without placeholders, but this presentation will not cover that.
Creating content (continued)

- Placeholder types include:
  - Textboxes (such as this)
  - Charts
  - Images
  - Tables
  - And more

- This presentation will only deal with textboxes, charts, images, and tables
An unpopulated slide with placeholders present
That same slide, populated
## Tables

Tables are more complicated to add, since they must be populated cell by cell.

<table>
<thead>
<tr>
<th>Person</th>
<th>Vanilla</th>
<th>Chocolate</th>
<th>Mint</th>
<th>Strawberry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jamal</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Elise</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Anthony</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Miriam</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Betsy</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

● = 1st  
● = 2nd  
● = 3rd
Images

```python
#Slide 9
slide = prs.slides.add_slide(image_slide_layout)
title = slide.shapes.title
img_placeholder = slide.shapes[1]

title.text = "Images"
img = img_placeholder.insert_picture('insertimageslide.jpg')
```
Textbox content is split into two categories: Paragraphs and Runs

A paragraph is all the text contained before a line break, which is created by inserting a new paragraph. A paragraph is made up of runs. A text box always has at least one paragraph, and a paragraph always has at least one run.

A paragraph can consist of a single run, or multiple runs. Runs allow the user to vary formatting within a paragraph, a sentence, or even a word.
Pros/Cons of Python-pptx

Pros
• Good for automation
• Simple, easy to learn
• Flexible

Cons
• Not good with static slides
• Just can't do some things