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
# 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

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Good for automation</td>
<td>• Not good with static slides</td>
</tr>
<tr>
<td>• Simple, easy to learn</td>
<td>• Just can't do some things</td>
</tr>
<tr>
<td>• Flexible</td>
<td></td>
</tr>
</tbody>
</table>