Publishing
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Features
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Source
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Reproducible Self-Publishing via PythonTeX

Introduction and Reference Slides

[github.com/TheChymera/RepSeP]

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Publish From Code, Openly.

▶ Transparency ⟶ verifiability.
▶ Reproducibility ⟶ hackability.
▶ Version management support:
    ▶ `diff` -ability.
    ▶ `blame` -ability.

Publish in a Distributed Model, Free.

- ▶ No entry barrier ⟶ citizen science.
- ▶ No institutional bias ⟶ free science.
- ▶ *Less* publication bias ⟶ honest science.
- ▶ "Direct Market Access".

Publish, in a Presentable Format.

- ▶ Article.
- ▶ Poster.
- ▶ Slides.

("Notebooks" integrate poorly with both presentation and development.)

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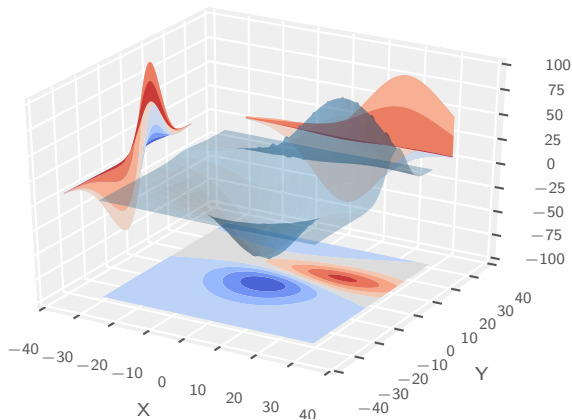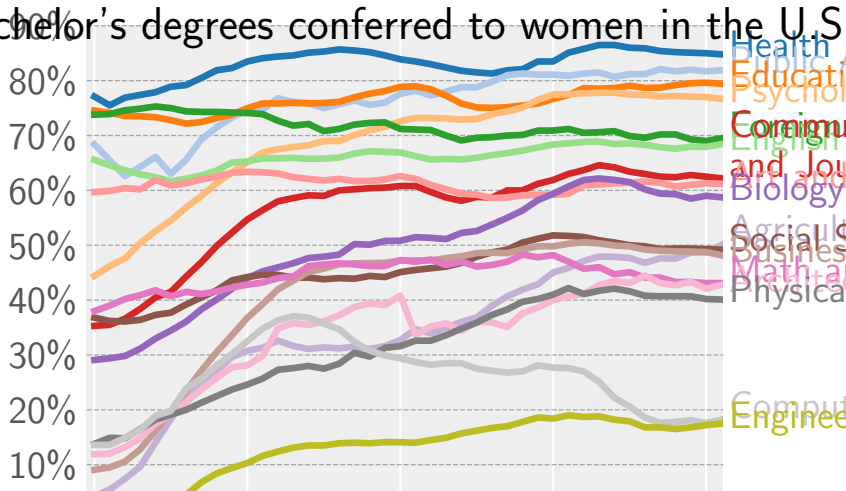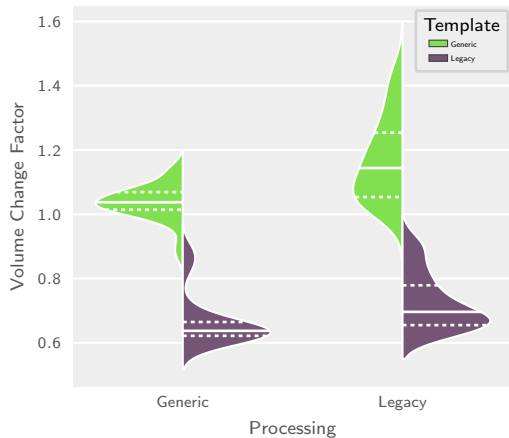○○○

Create All Graphic Elements Directly from Source.

Figure: A 3D plot.

Percentage of Bachelor's degrees conferred to women in the U.S

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Create All Graphic Elements Directly from Source.

And So Much More
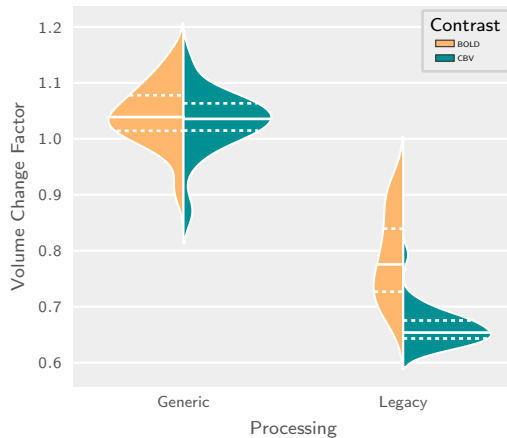
Onset [s]	Duration [s]	Frequency [Hz]	Pulse Width [s]	Wavelength [nm]
333.05	20.0	20.0	0.005	488.0
513.05	20.0	20.0	0.005	488.0
693.05	20.0	20.0	0.005	488.0
873.05	20.0	20.0	0.005	488.0
1053.05	20.0	20.0	0.005	488.0

Table: BIDS event file table.

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Create All Graphic Elements Directly from Source.

Sometimes Less is More

$$F_{1,268} = 10.97, \; p = 0.0011$$

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Create All Graphic Elements Directly from Source.

But Sometimes You Just Want More

- ▶ Processing Factor: $F_{1,268} = 72.8$, $p = 1.07 \times 10^{-15}$
- ▶ Template Factor: $F_{1,268} = 1333$, $p = 5.13 \times 10^{-106}$
- ▶ Processing:Template Intearction: $F_{1,268} = 10.97$, $p = 0.0011$

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The Code, Workflow, and Environment Behind the Curtain

Typesetting the Previous Radar Plot

```
\py{
    pytex_fig('scripts/radar.py',
        label='radar',
        caption='A radar plot.',
        )
    }
```

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The Code, Workflow, and Environment Behind the Curtain

Typesetting the Previous Table
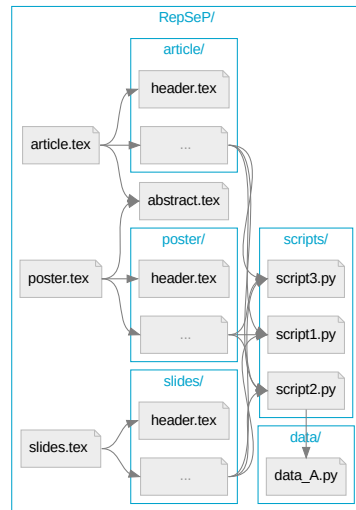
```
\py{
    pytex_tab(
        script='scripts/stim_table.py',
        label='sp',
        caption='BIDS event file table.',
        options_pre='\\centering \\resizebox{0.5\\textwidth}{!}{',
        data='data/JogB.tsv',
        options_post='}',
        )
    }
```

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The Code, Workflow, and Environment Behind the Curtain

Typesetting the Previous Inline Statistic

```
\py{
    pytex_printonly('scripts/drs_activityANOVA.py')
    }
```

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The Code, Workflow, and Environment Behind the Curtain

The Framework Topology

- ▶ Reduced information duplication.
- ▶ Continuous development support.

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The Code, Workflow, and Environment Behind the Curtain

The Workflow

- ▶ Asynchronous offloading for time-consuming analysis.
- ▶ Separate packaging for deep analysis stacks.
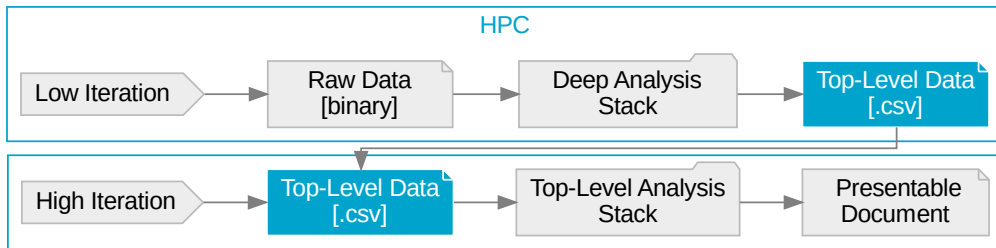
Minimal First-Level Dependencies

```
dev-python/matplotlib
dev-python/numpy
dev-python/pandas
dev-python/seaborn
dev-python/pygments
>=dev-python/statsmodels-0.9.0
>=dev-tex/latex-beamer-3.41
>=dev-tex/pythontex-0.16
```

Following the Package Manager Standard (PMS):

▶ Because dependency graphs should never be managed ad hoc.

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How You Can Benefit from This Right Now.

Co-Author the Reference Implementation

▶ The `article.tex` reference document is still in early draft.
▶ You can contribute, fork, and publish it however you want.

Gain the Best Exposure for Your most Underexposed Work

▶ Pay-for-Paywall vs. "Direct Market Access".

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How You Can Benefit from This Right Now.

Gain the Best Exposure for Your most Underexposed Work

▶ Pay-for-Paywall vs. "Direct Market Access".