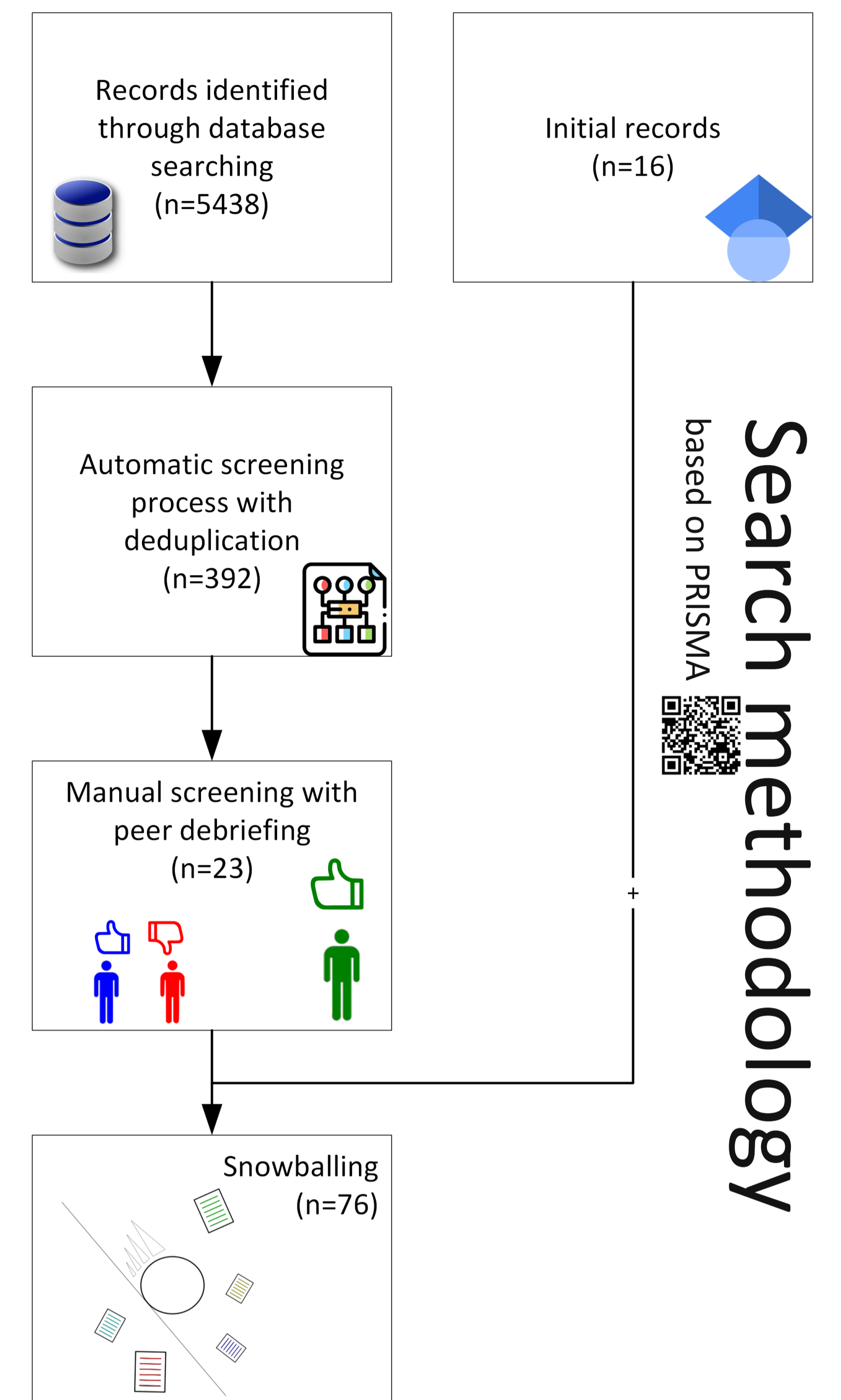# A tour through the zoo of scented widgets

Vasile Ciorna[1,2], Nicolas Médoc[3], Guy Melançon[2], Frank Petry[1] and Mohammad Ghoniem[3]

Motivation: Visualization publications often propose systems designed with interactive visualizations and widgets. The latter are often enhanced with additional visualizations, called **scents**.

We focus on scented widgets, explore the available literature and propose a categorization and an online browser intended to be helpful for visualization researchers and frontend developers in user interface design tasks.

Open challenges:

• **C1** – What is a scented widget and what is an interactive visualization? Where do we draw the line?

• **C2** – Search based on text vs based on images for visualization papers. How do we survey databases for visualizations?

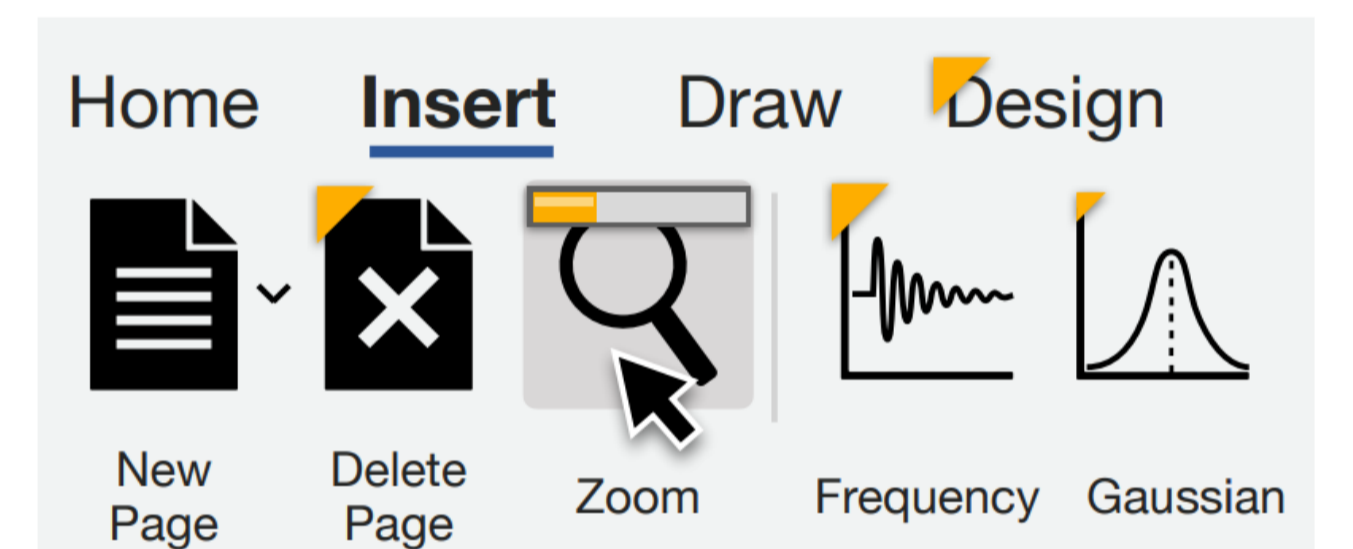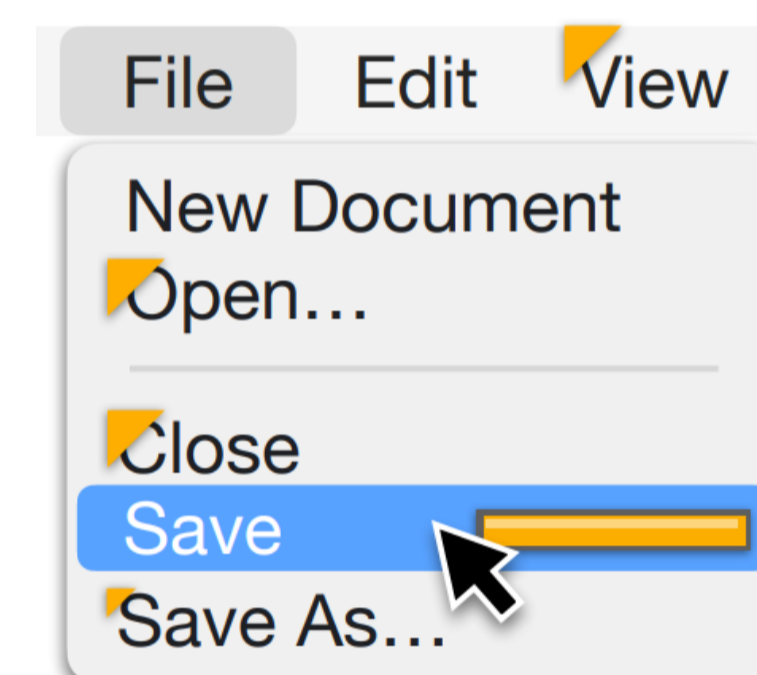• **C3** – Shall we also consider non-visual channels (audio, olfaction, touch, etc.) to encode information scent?

Search methodology
based on PRISMA

Records identified through database searching (n=5438)

Initial records (n=16)

Automatic screening process with deduplication (n=392)

Manual screening with peer debriefing (n=23)

Snowballing (n=76)

Scented widgets

Purpose
- Enhanced filtering
- Enhanced selection
- State preview
- Collaborative decision-making
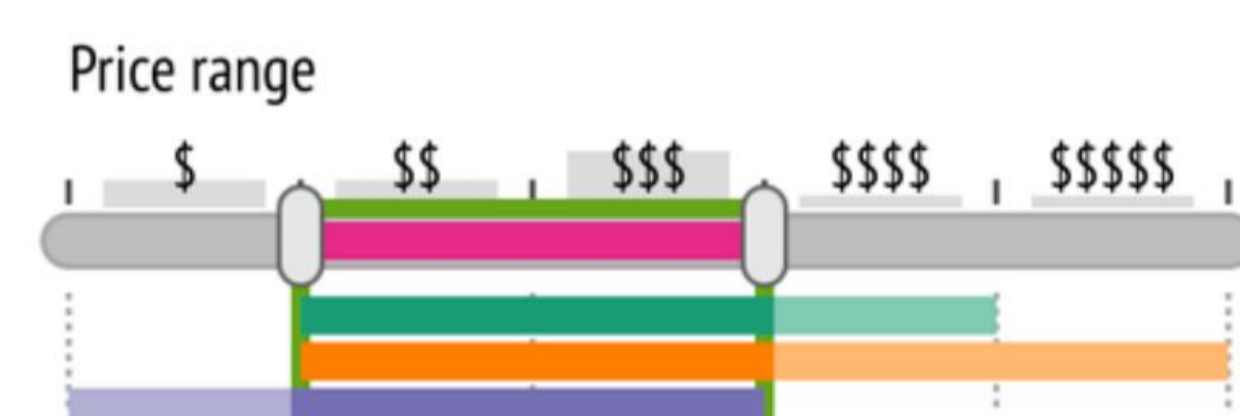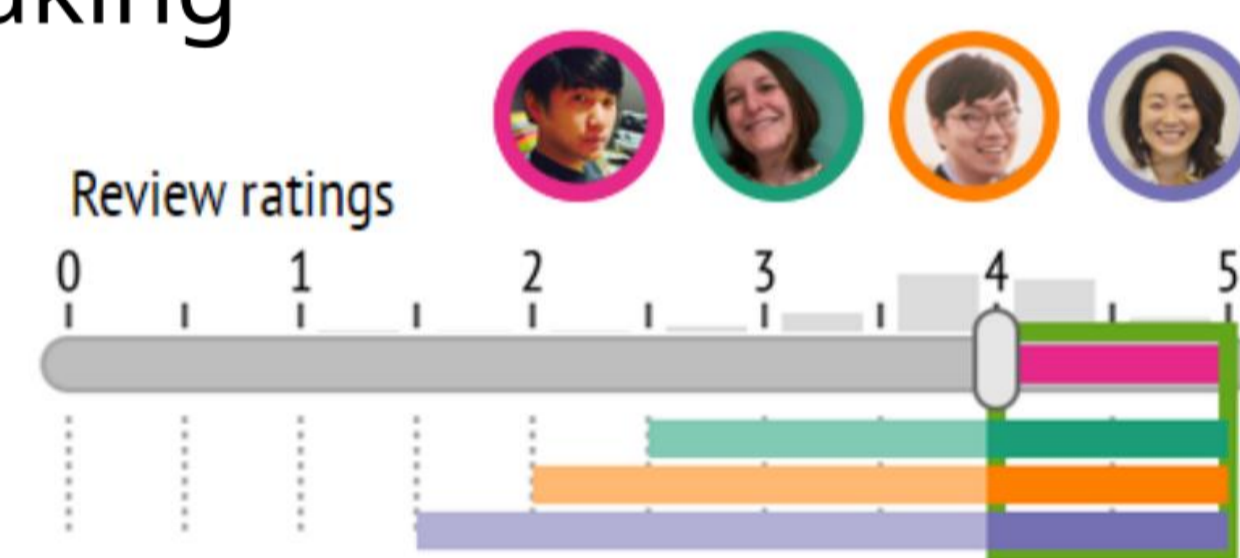- Combating bias
- Query formulation
- Optimization

Widget type
- Button
- Slider
- Textual input
- List
- Custom widget

Number of scents
- 1
- 2+

Type of scents
- Image
- Heatmaps
- Histograms
- Line/scatter plots
- Glyphs
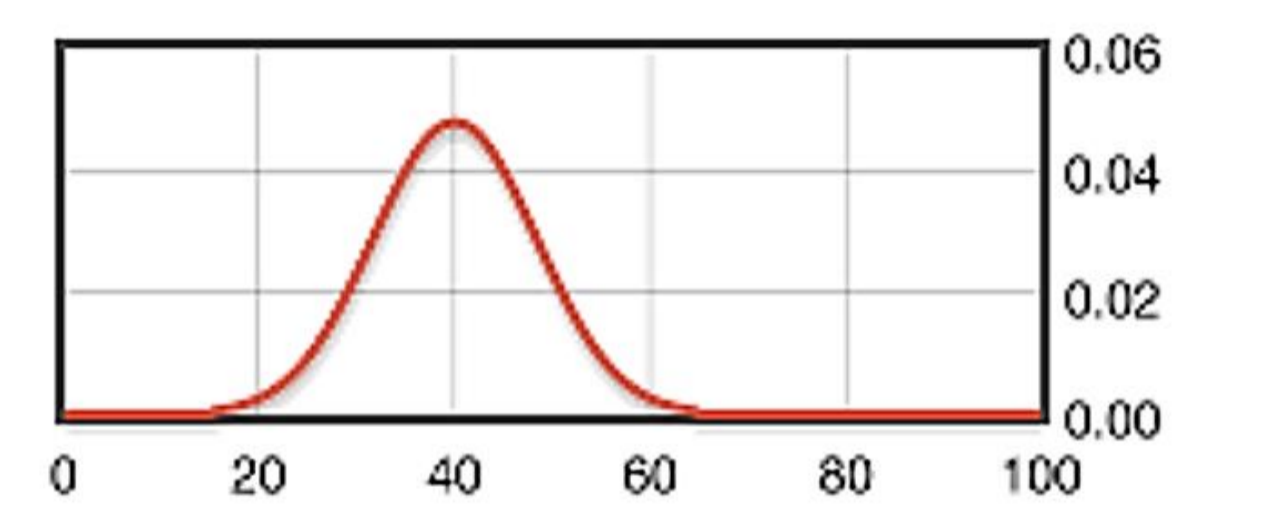- Custom visualizations
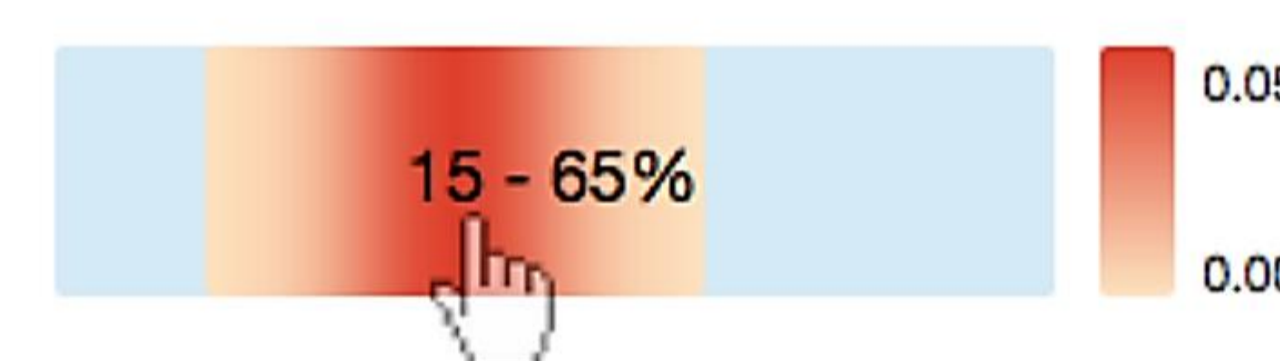- Dynamic content

Masson et al. 2022

Review ratings

Price range

Picnic : A Food + Wine Boutique ★★★★★ 4.5
Well-known (51 reviews), Affordable ($$$), 18min.

Mura Asian Eatery ★★★★★ 4.5
Well-known (60 reviews), Affordable ($$$), 27min.

New Teriyaki & Wok ★★★★ 4
Well-known (59 reviews), Affordable ($$$), 27min.

Nikko Teriyaki ★★★★ 4
Well-known (88 reviews), Affordable ($$$), 23min.

Yummy Teriyaki ★★★★☆
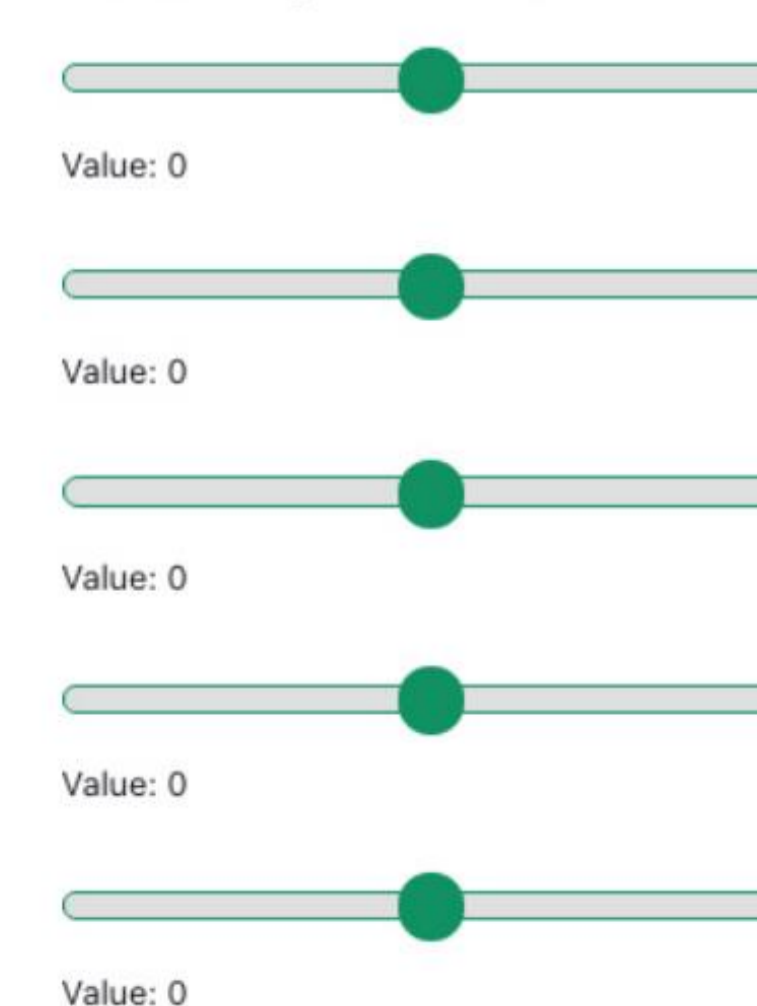Well-known (78 reviews), Affordable ($$$), 25min.

Hong et al. 2018

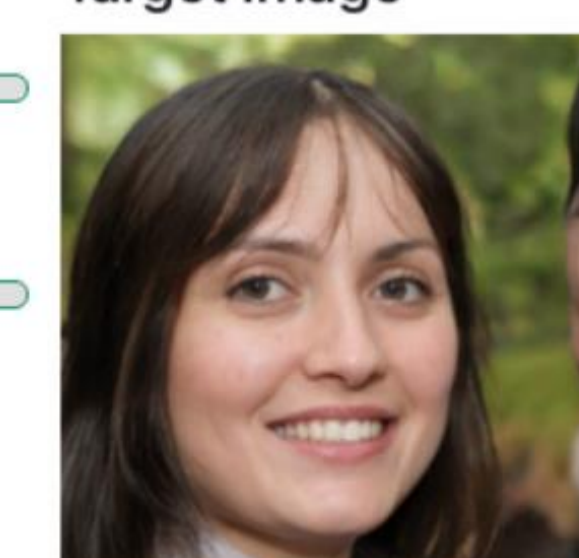Greis et al. 2018

15 - 65%

Slider Adjustments — Your Image — Target Image

Slider Adjustments

Dang et al. 2022