

Setting up a pipeline to easily evaluate and compare brightness perception models

Matko Matic & Joris Vincent & Lynn Schmittwilken

Motivation

Many brightness stimuli & brightness models

- Code often not publicly available
- Precise configurations often not clear
- Model evals only on stimulus subsets
- Systematic evaluation almost impossible

Goal: Set up pipeline for easy evaluation & comparison of brightness models

- Let's evaluate!
- Let's compare!
- Let's open science!
- Let's modularize!

Repositories

For the stimuli

- stimuli repo
- ...

For the models

- multiscale repo (ODOG, LODOG ...)
- Domijan2015 model
- ...

The pipeline

- config.py
- main.py
- demo.py

Use cases

- User: Run full pipeline as is
- User+: Add your own stimuli / stimulus configs
- User+: Add own model configs
- Contributor: Add own models

Pipeline overview

Components

Stimuli

Brightness models

Outputs

Example

