

Project 1 by Leia

About Me

I'm Leia (like the princess) an AI founder building at the intersection of healthcare and spiritual tech. I grew up in Lima, Peru and study Computer Science & Economics at UC Berkeley.

Part 1: Align Function

Monastery (PNG)



Reflection

I crop ~10% off all sides before scoring to suppress plate borders/labels that bias NCC. I search a local window (± 15 px) and pick the displacement with the highest NCC. Using R as the reference yields sharper edges and fewer color fringes than using B.

Method: single-scale NCC; border crop $\approx 10\%$.

Pyramid Function

Self-portrait (PNG preview)



Note: Original input is `images/self_portrait.tif`. Browsers don't display TIF reliably, so I exported a PNG for the site.

Reflection

A naive pyramid with `np.resize` tiled the image. I switched to proper resampling (`skimage.transform.rescale` with anti-aliasing) and used NCC (optionally on Sobel edges) across ~6–7 levels. After the coarse shift, a small $\pm 3\text{--}4$ px refine plus a final 10–14% crop removes residual color borders.

Method: pyramid NCC (~6–7 levels), anti-aliased resampling; optional Sobel-NCC; crop $\approx 10\text{--}14\%$.

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