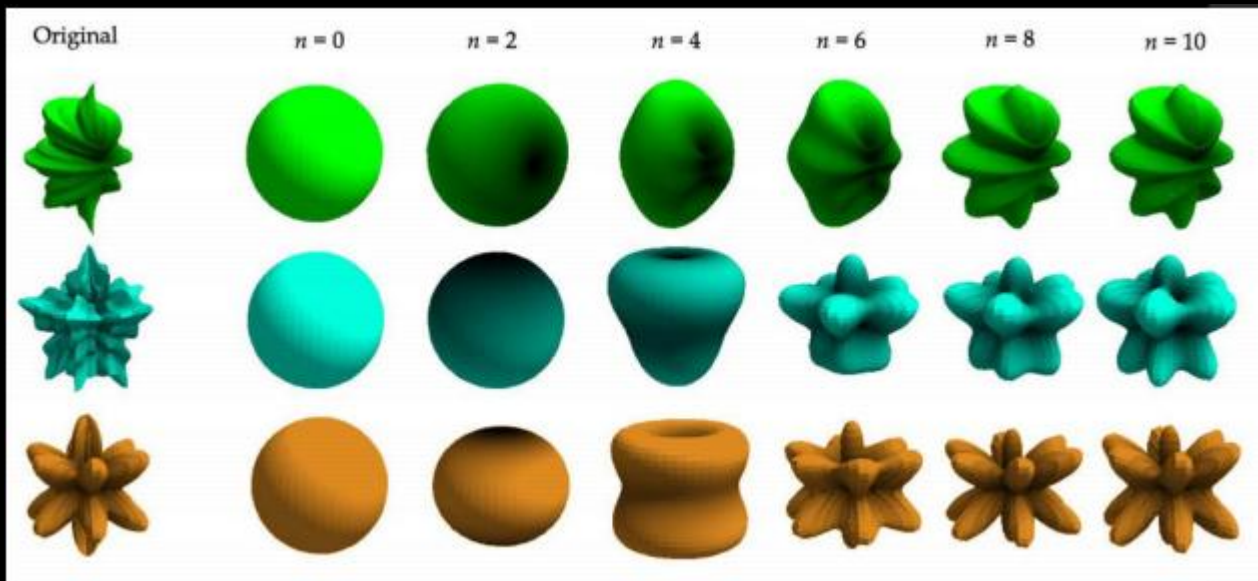


GENDER DETECTION USING SH AND BP NN

SPHERICAL HARMONICS

- The spherical harmonics are the angular portion of the solution to Laplace's equation in spherical coordinates

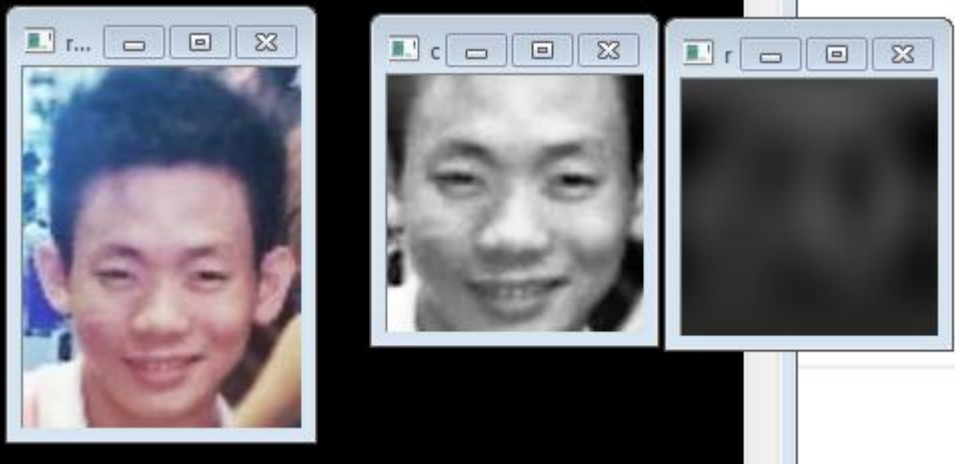


SPHERICAL HARMONICS

$$L_{lm} = \int_{\theta=0}^{\pi} \int_{\phi=0}^{2\pi} L(\theta, \phi) Y_{lm}(\theta, \phi) \sin \theta \, d\theta d\phi$$

$$L(\theta, \phi) = \sum_{l,m} L_{lm} Y_{lm}(\theta, \phi)$$

EXAMPLE



REFERENCE

- An Efficient Representation for Irradiance Environment Maps ,Ravi Ramamoorthi Pat Hanrahan, Stanford University