Prerequisite: Math 721

Text: Digital Image Processing by Gonzalez et. al. is recommended, but not required

This course will provide an introduction to some practical applications of harmonic analysis, though as you can see from the prerequisite, no particular background in harmonic analysis is assumed. I intend to cover

1. Fundamentals of digital images, including definitions, quantization, and color models
2. 2-dimensional transform techniques and their properties, including the Fourier and fast Fourier transforms, Walsh transform, Hotelling transform, and wavelets.
3. Image analysis, including enhancement and segmentation.

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