

EE 368 Project Proposal
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Project title: Skin disease detection using image processing

Project description: In this project we will build a skin disease detection pipeline using concepts from image processing. We will work with skin images collected from a mobile phone and build a segmentation and classification pipeline. In order to do this we will first attempt to recreate existing skin segmentation and detection pipelines.

http://www.iaeng.org/publication/WCECS2013/WCECS2013_pp850-854.pdf

<http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=7026918>

<http://www.ijcaonline.org/research/volume137/number12/yadav-2016-ijca-909001.pdf>

Generally these pipelines rely on extracting features from the image (HOG, color codes) and then general unsupervised learning methods like k-means clustering.

Our goal will be to implement a pipeline where we can take a photo of skin and classify it generate a pixel wise segmentation map of the image and classify whether the skin mole is melanoma or nevi.