

Melanoma Detection

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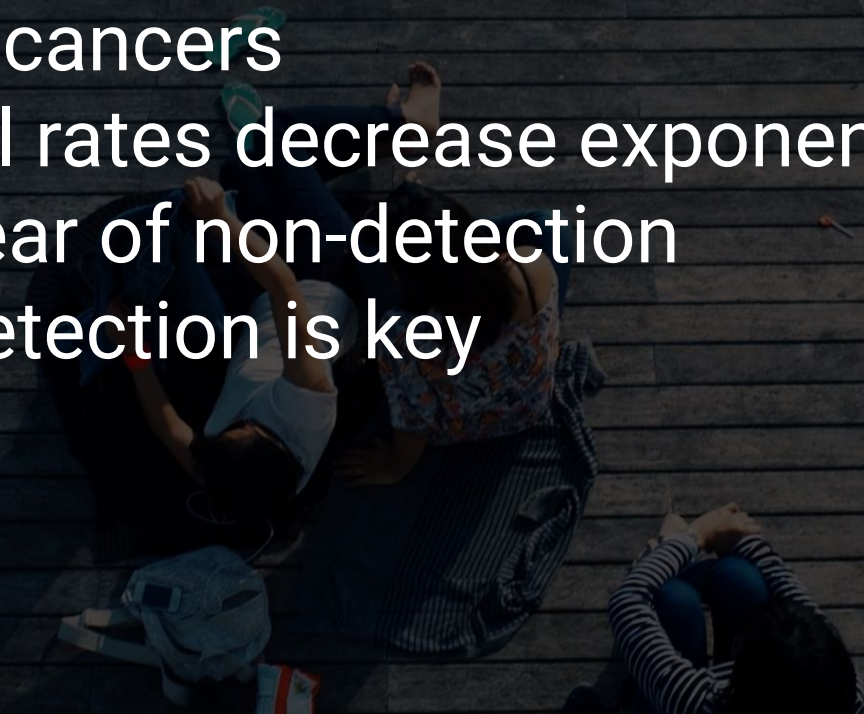
Zane Durante

New Visitor Returning Visitor



Background

- Skin cancer is the most common of all human cancers
- Survival rates decrease exponentially with each year of non-detection
- Early detection is key



Long Term Goal

- Going to a dermatologist is an obstacle for many people, so our goal is to allow for self-diagnosis at home
- Ideally, we could create a model that is at least as accurate as a dermatologist in identifying melanoma

Obstacle

- Images from popular cancer datasets do not reflect real-world conditions
 - Often taken under microscope, perfect lighting, etc.
- We want to be able to use lower quality images to predict melanoma

The dataset

- We used ISIC's (International Skin Imaging Collaboration) 'Benign or Malignant' skin tumor dataset
- Contains over 24,000 images of tumors labeled 'benign', 'malignant', or 'unknown'

Welcome to ISIC

The International Skin Imaging Collaboration



About ISIC

Learn about the ISIC Project and our goals to advance melanoma research



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Machine Learning Challenges

Participate in open competitions and review past challenges



Upload Data

Contribute images and data to the ISIC Archive



Participate in Studies

Use our annotation platform to contribute data to ongoing studies



Dermoscopyedia

Learn about Dermoscopyedia and our efforts to enhance Dermatology education



Dashboard

View dashboard



Download Data

Learn how to use our API to download large sets of data

An aerial photograph of a city skyline at dusk or dawn. The sky is a mix of dark blue, purple, and orange. The city is densely packed with skyscrapers, many of which have their lights on. The Empire State Building is prominent in the center, with its top lit up. The text "Data processing" is overlaid in a large, white, sans-serif font across the middle of the image.

Data processing

An aerial view of a city skyline at dusk, featuring numerous skyscrapers and a prominent tower with a red and green top. The sky is dark with some clouds, and the city lights are visible. The title 'Models/Results' is overlaid in large white text.

Models/Results

ResNet-50 - Leena, Kian, Zane

Inception - Priyank

Steps moving forward

- Build a model that can self-diagnose melanoma from phone images of skin
- Incorporate other factors (e.g. family history/gender/age) into the prediction

