Skin Scan

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Idea and Significance

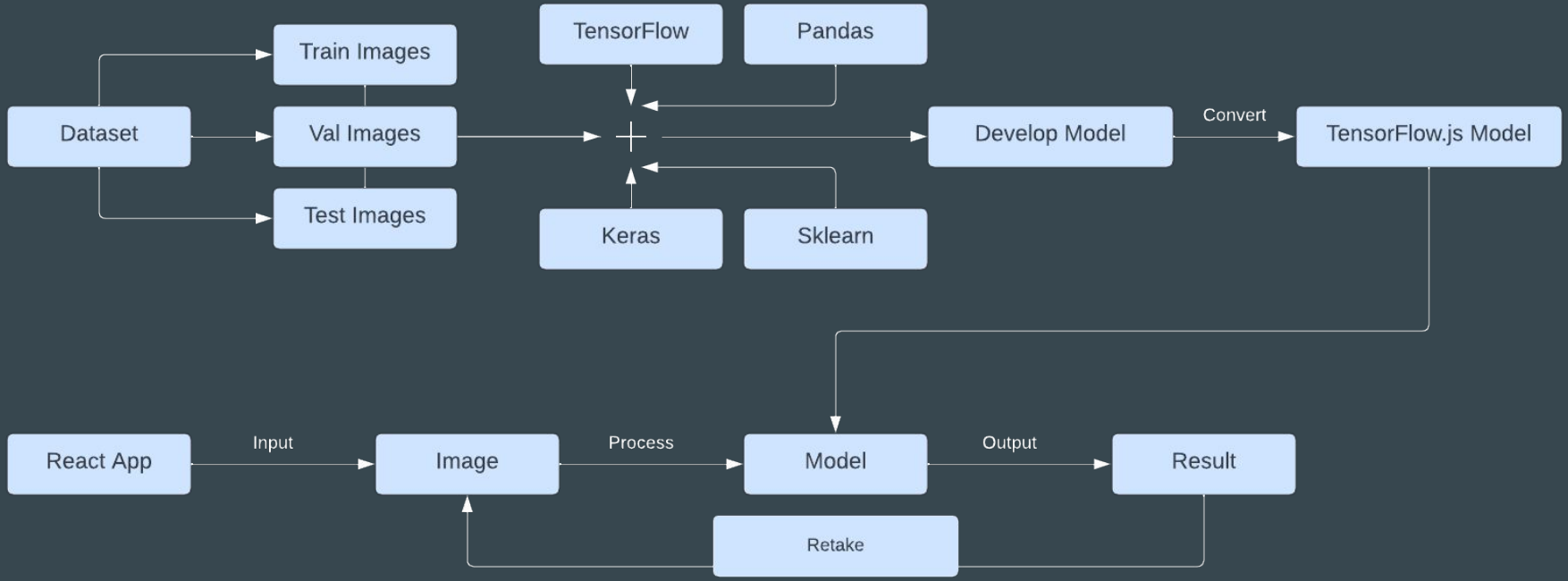
Idea:

Develop a self-trained model to accurately identify different skin conditions

Significance:

- AI in medical field improves accuracy of diagnoses, drug discovery, and reduces costs
- Ease of use
- Model trained on different lighting conditions and skin pigmentation
- App runs locally, privacy concerns

Design


Train Images
Dataset
Val Images
Test Images
TensorFlow
Pandas
Keras
Sklearn
Develop Model
Convert
TensorFlow.js Model
React App
Input
Image
Process
Model
Output
Result
Retake

Requirements and Challenges

Requirements (%83 complete)

- Model exceeded given requirements substantially (3/3)
- App load image and app being put onto google play store, results not printing (2/3)

Challenges

- Tools and Programming Languages (learning curve)
- new concepts and topics (learning curve)
- Time

Images

Three classes of data for model

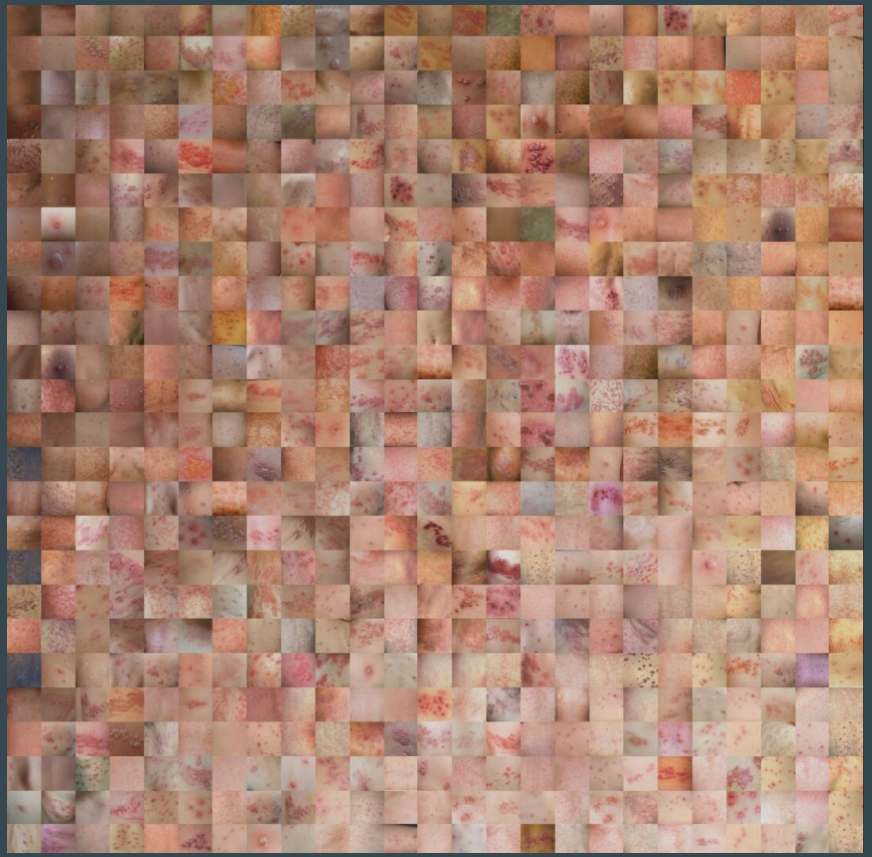
- Chickenpox

- Measles

- Shingles

(Monkeypox excluded)

200 images for each classes, 600 total



Code Walkthrough

Release Notes Summary

- Model compilation results can sometimes have overfitting, depending on the seed
- App cannot display prediction results to the user
- App bug where sometimes using camera does not work