Skin Cancer Detection Using Deep Learning Models

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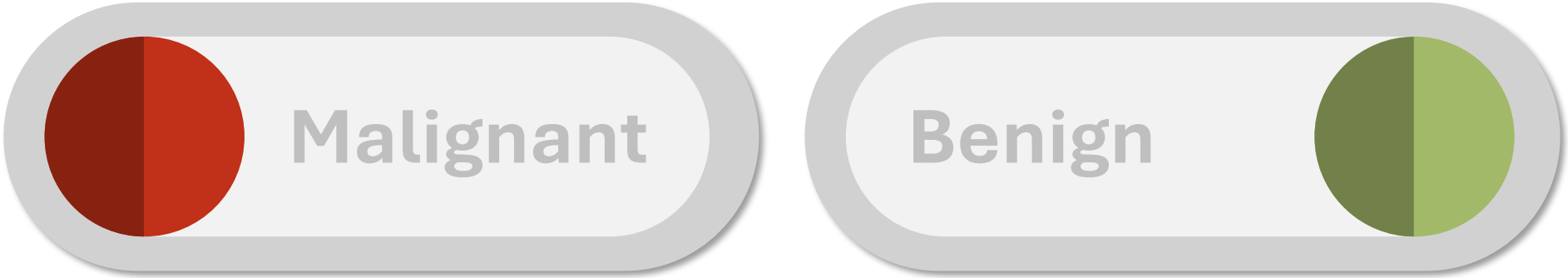
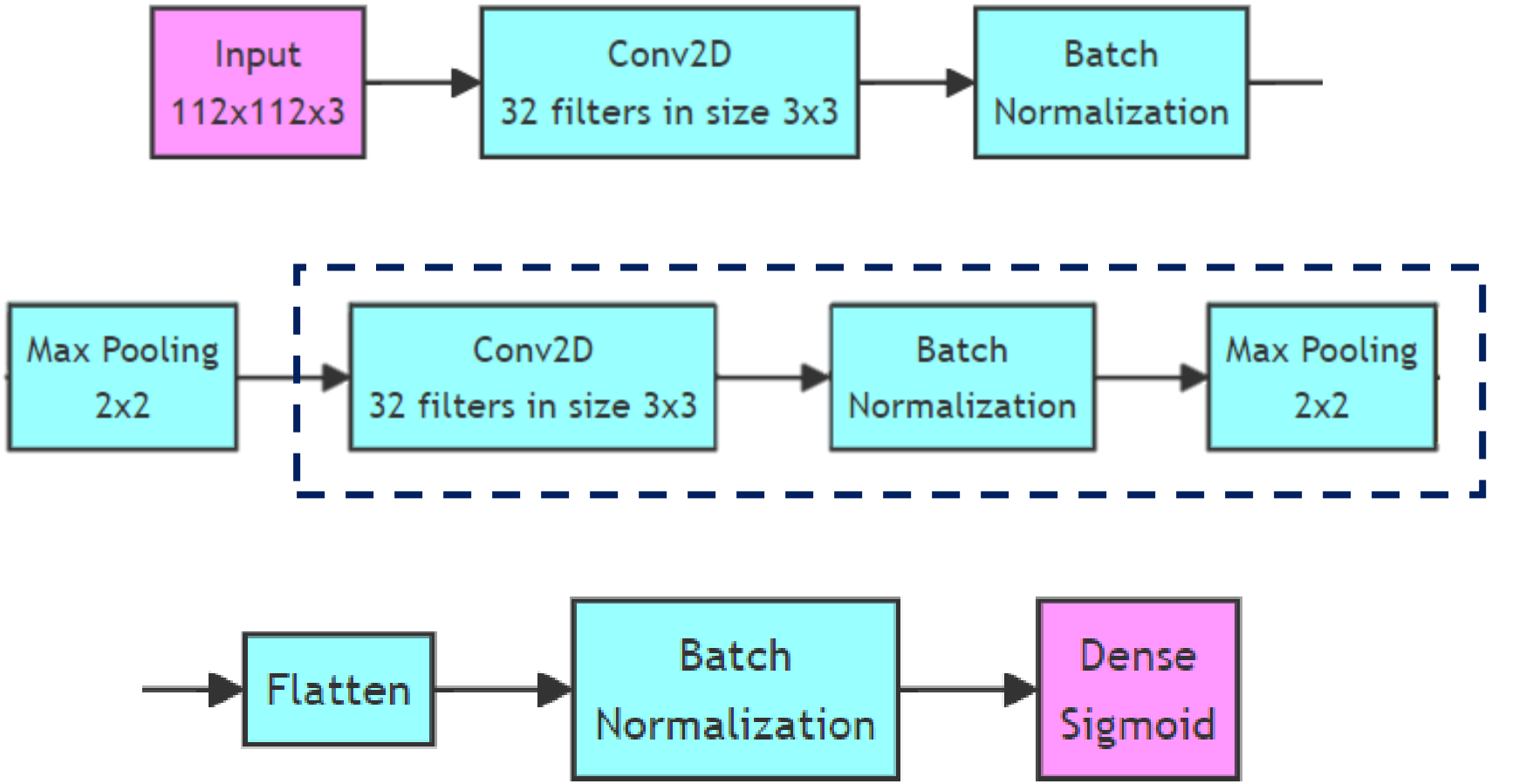
What is Neoplasm & Our objective

Given a Neoplasm



The question arises whether it is possible to identify this from an image?

Methods

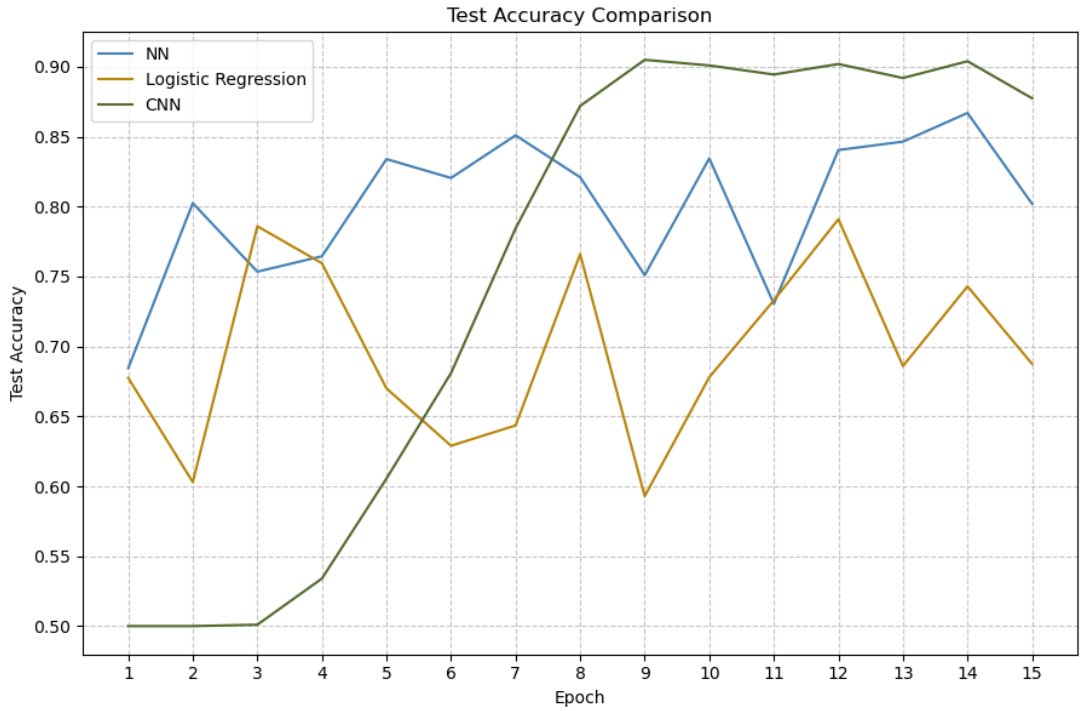


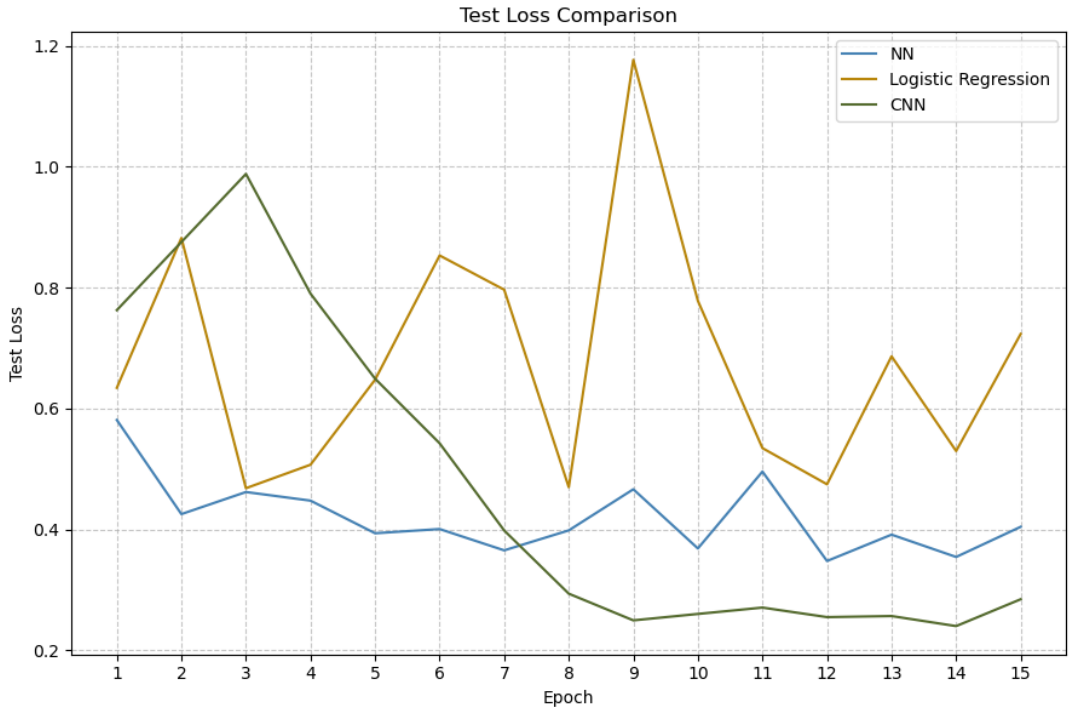
Training

Adam | Log loss | 15 epochs | 128 size batch

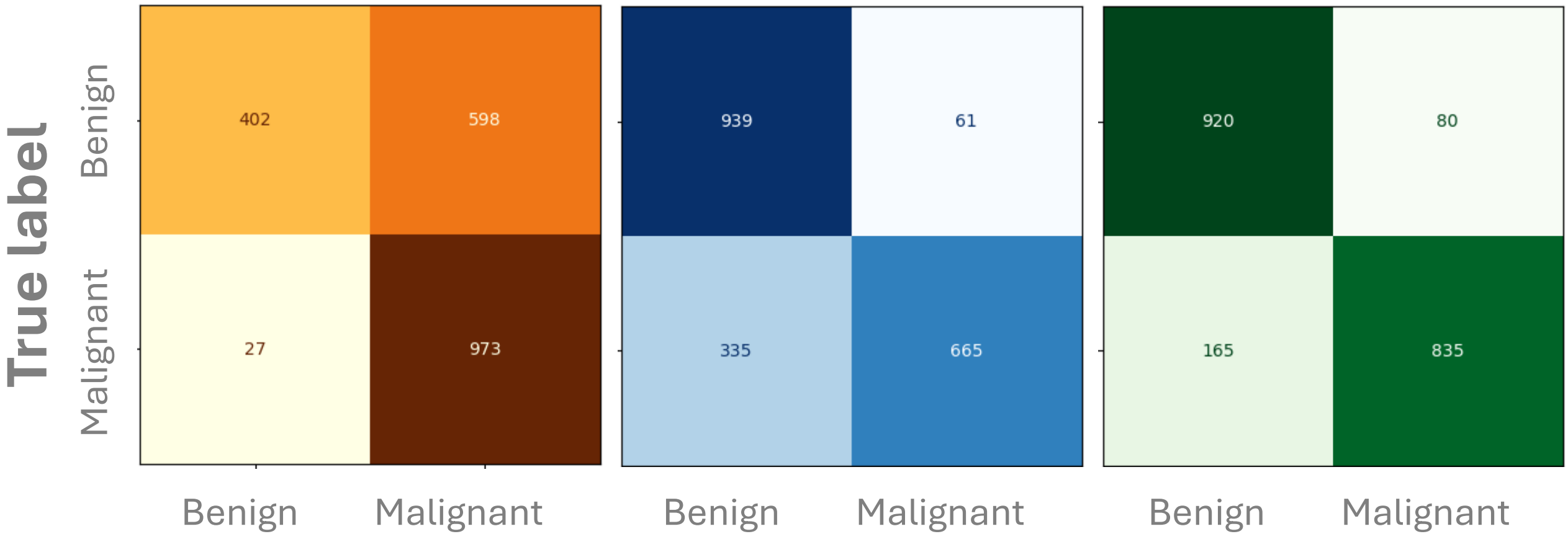
Results

Model	Accuracy	Precision	Recall	Loss
Logistic Regression	69%	62%	**97%**	0.312
NN	80%	**91%**	67%	0.198
CNN	**88%**	**91%**	84%	**0.112**





Results – Confusion Matrixes

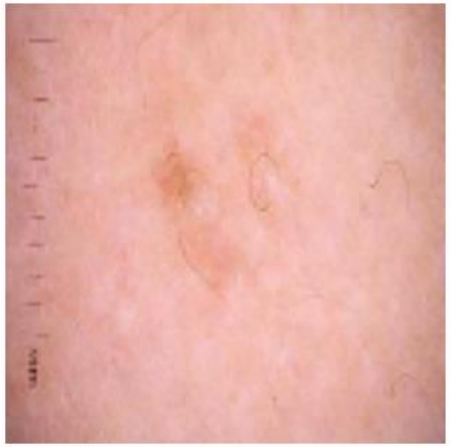


Prediction Examples

Prediction: Benign
True: Benign
0.07
✔

Prediction: Benign
True: Benign
0.03
✔

Prediction: Benign
True: Benign
0.13
✔



Prediction: Malignant
True: Benign
0.77
✘

Prediction: Benign
True: Benign
0.04
✔

Prediction: Benign
True: Benign
0.40
✔