

User Story

Who is the user? What do they want to do with the tool? What needs and desires do they want for the tool? What is their skill level?

Hanson is a professional doctor. He wants to diagnose breast cancer from images of breast tissue for his patients, specifically for early-stage prognosis. To be effective, the software should be easy to use for a non-data science user and produce quantitative results. The results should be reproducible between different doctors and/or sample preparation techniques.

Use Case

Early-stage breast cancer.

Advice for treatment options based on prognosis

Input: tissue images/scans

Output: some kind of quantitative score indicating how far along the tumor is

Components

Name: Image Segmentation

What it does: Identifies the spatial arrangement of different immune cell types in a breast cancer tumor.

Inputs: Pre-processed image of breast cancer tumor

Outputs:

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Side effects: I

- Inconclusive/inaccurate image result
- Disagreement between doctor & diagnosis

Things to Consider

- How long will the software take to run each image?
- Accuracy?

Possible Users

- Me! (Lisa)
- People updating/managing the software
- Someone who has a lot vs. little experience with diagnosis

Add doc directory to repo

Is neoadjuvant chemotherapy the right treatment option?

Meenal → point of contact for style transfer stuff

Find a style transfer model that works