

10/31/2019 meeting

Patch:

The black dots (contamination) can be either manually get rid of or ignored as noise.
More Patches are needed for future heatmap

The background color matters(yellow and pink). I still did not see why this differentiates bacteria. At present all available images are yellow tinted.

Model:

Redefine the training dataset and validation set:
Trained on streak. Validated on series. Tested on control.

Evaluation:

Deiby presented the good masks he created and we think those masks can be used for measuring the heatmaps performance.

Correct me if I am wrong, we will not get the annotation for the mixed bacteria images so we are not able to measure how good the prediction and localization are. At the end, we will present a result without evaluation.

Akihl talked about some methods I was lost then. Please add some notes.

Things to do in the next week:

Retrain the model on new dataset.
More patches will be generated for the heatmaps.
Using the mask to measure the performance of localization.

10/7/2019 meeting

Timeline:

What we need to do before Oct 18:

- 1 Finish annotation of pictures
- 2 Create the patches of pictures (a patch extraction module that can work)

What we need to finish before November:

- 1 Build a baseline model

What we need to finish before December (final presentation):

- 1 Improve the baseline model

First report:

Because we don't have to work on feature Engineering, it is okay to put some basic statistical summary of pictures instead of the EDAV.

Final goal of project:

Given a picture with multiple bacteria colonies, the model can predict which colony is from which bacteria.

General Model Idea suggested:

Annotate the colonies -> create patches of pictures -> train the model based on patches -> predict whether this patch is from the background or a specific class.

Parihdi also talked about using different patch sizes and heatmaps to train the model. I am a little lost here. Hope she can add some notes or share some articles.