Vein Finder

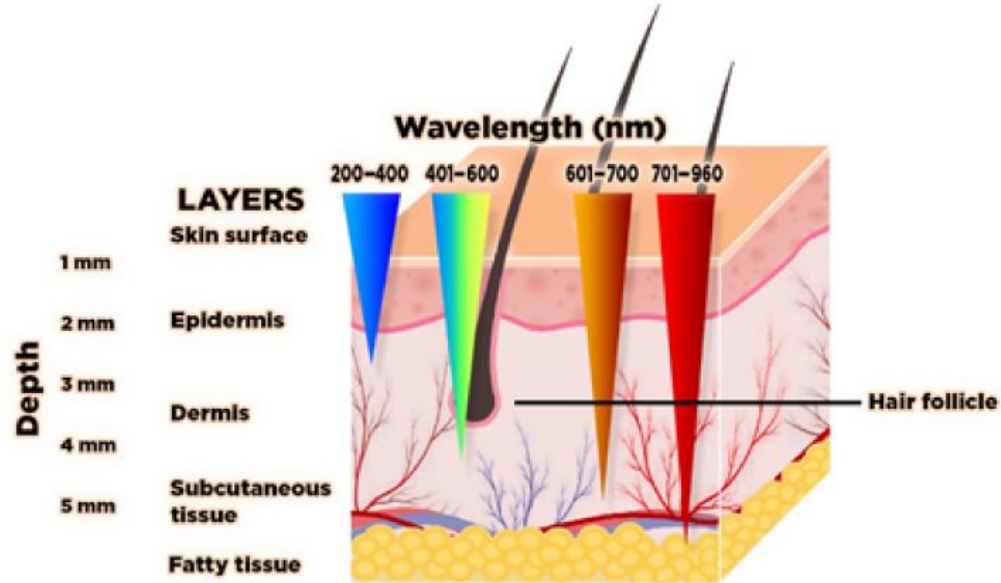## Midterm Presentation

Semrah Odobasic, Jin Jeong, Donggi Lee, and Logan Allen

How does Veinfinder work?

- Veins carry deoxygenated blood with hemoglobin.
- Hemoglobin absorbs IR light which makes the veins visible in the IR spectrum.
- Our process includes shining IR light on to someone's arm which will then then be visible using the Picam2 NoIR.
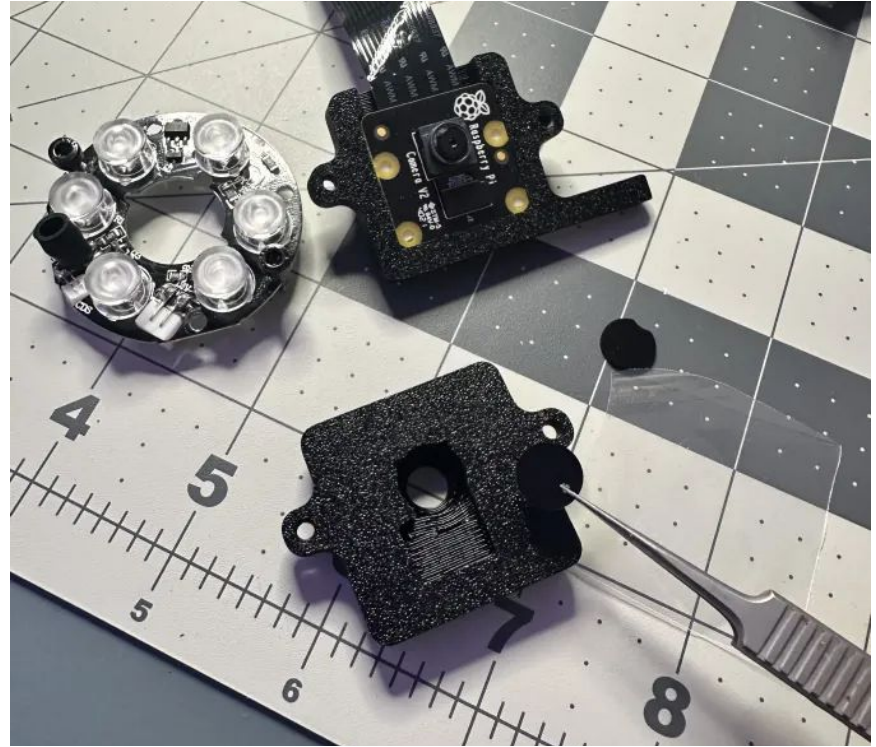
Redesign of the Chassis

- Smaller Size
- More Robust and Reliable
- Easier to Debug
- Unibody Design
- Better Ergonomics
- Adjustable Camera Angle for Alignment using Ball Joint
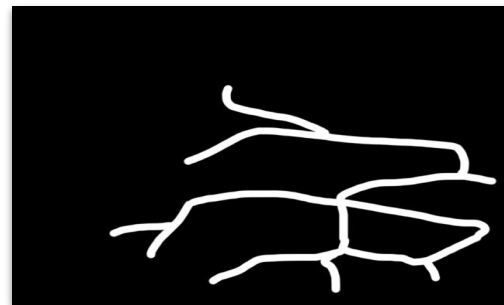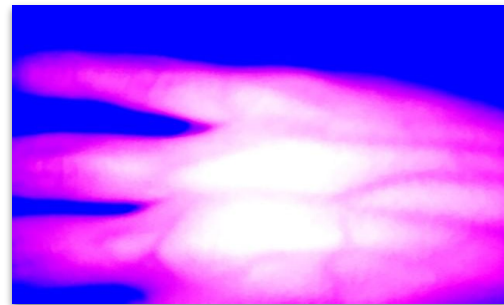- Removed 10000mAh Battery

IR Pass Filter

- Substantially improves image quality without software adjustments.
- Gives us a better start for segmenting the veins.
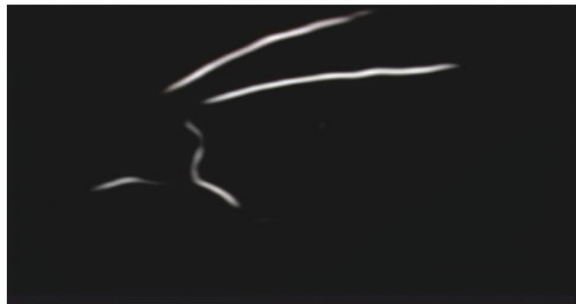
Data Collection for segmentation

- Took 10 different people's veins, xxx workables
- Manual annotation of the Ground Truth (Veins)
- Implemented the C# Script for Generating the Augmented Data

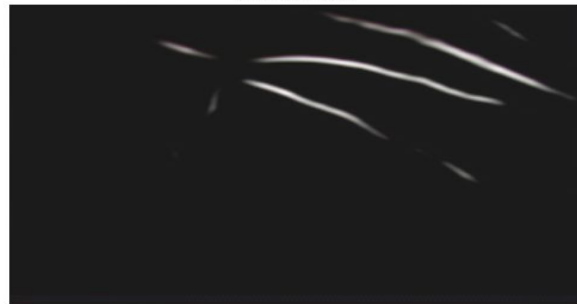 Data From 66 → xxxx
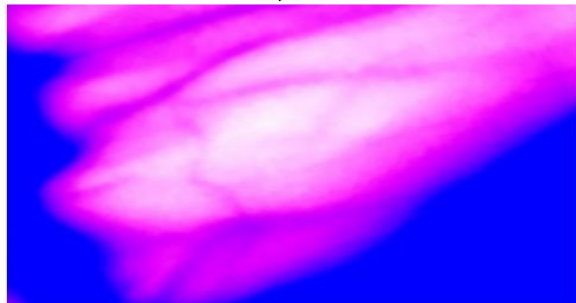
Initial Model Training for Segmentation
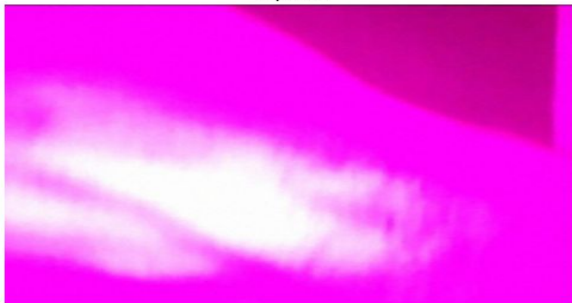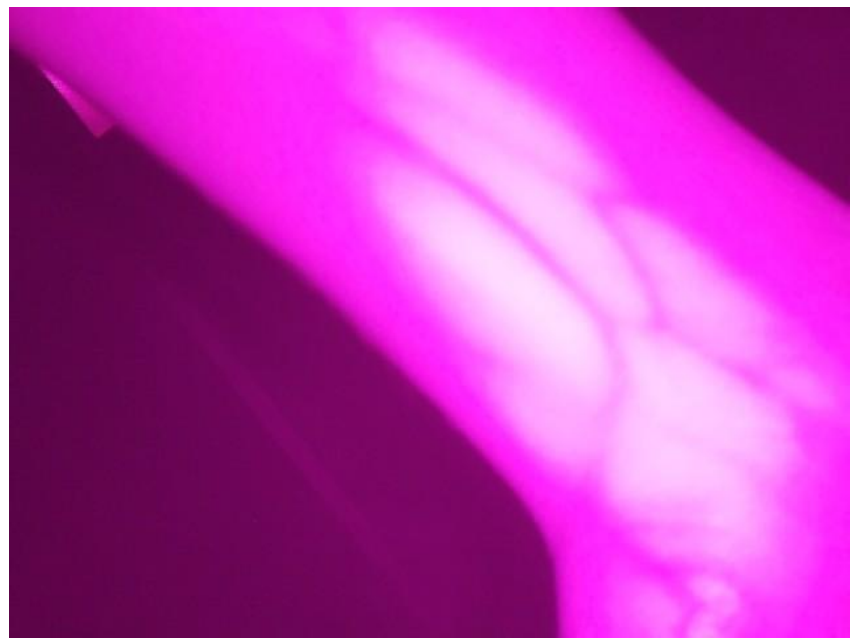
Improved Model Training for segmentation

// Add Picture for Improved model and the Output pictures, with same format aswell.

Model Implementation

// Add the Picture for Live projecting the vein on the screen with the given Improved model

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