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SADDA HACK 2020

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1. Problem Statement

An android based application to be built for image analysis and image processing of Otoscope images. The application should be able to set the proper orientation of the clicked image, Remove Blue Light from background and add text at the corners of image.

The android application should have option to click image or upload the image to be processed. Once the user clicks or uploads the image then, proceed as follows

- Check Clarity of Image
- Check if any wax is present in the ear canal if yes, prompt about percentage of was present.
- Remove blue light from image (By adding Blue-Light Filter)
- Check the image is Right Ear Otoscope Image or Left Ear Otoscope Image
- After deciding about the side, then compare the image with database of sample images and check the orientation of the image
- If required, change and set it to proper orientation
- Add Patient Name to the upper corner and Side of Ear(R or L) to the lower corner of image as text
- Save the image in proper location in phone memory.

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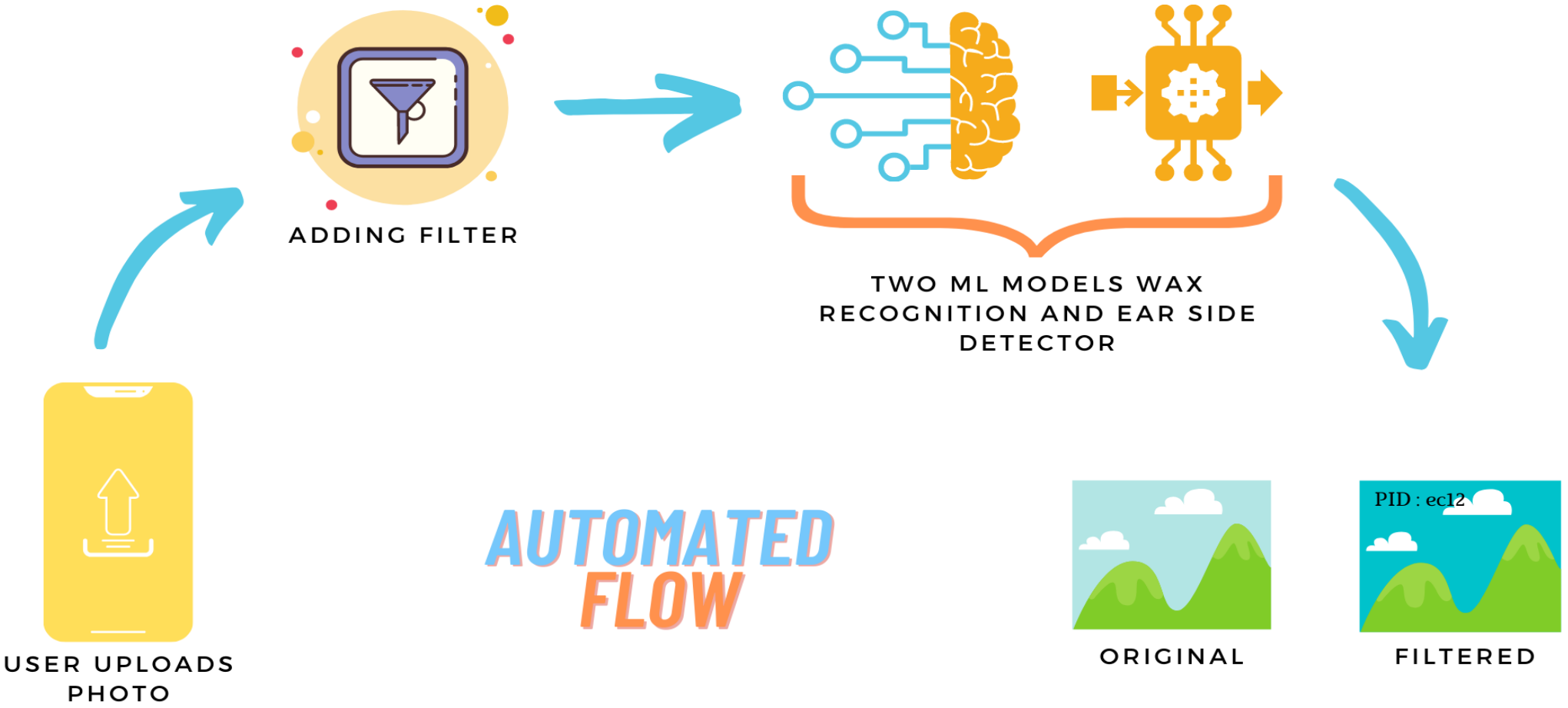
Our Idea



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Feasibility

- Very simple UI/UX platform to users
- User just have to upload images to get the expected results
- Best Machine learning algorithm used in the model to give high accuracy result to user
- Users also gets an option to choose particular filter to enhance the clarity of the images
- Best light weight framework (Flutter) is used to give a user best responsive platform

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Technology

Front End

Flutter Framework

Back End Process

Firebase Machine Learning Kit - Flutter

Future Scope

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- The application almost reduces doctor work – Time saving
- If we train our model with other criteria and problems we can level up this application
- Now a days everyone want to reduce their work especially the paperwork so this application could help the medical field
- The technology used in this are almost advance so no need to require building it again with upcoming technologies

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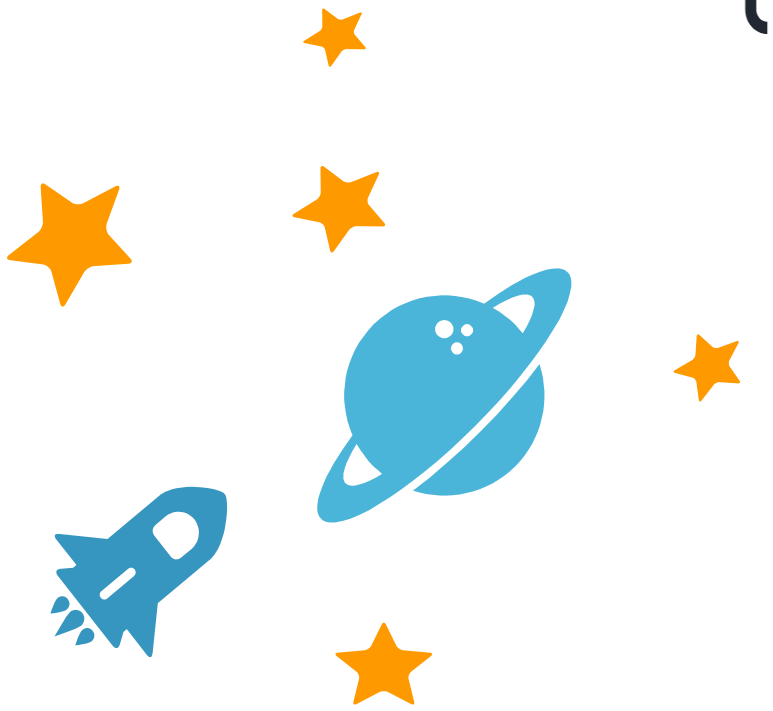
Our Impact



How our solution can impact the society

Step 1 :
User uploads the image from his local storage

Step 2 :
User chooses the particular filter on enhance the clarity of image

Step 3 :
User will see the original and filtered image and able save that in his local storage

Any questions?

THANK YOU!!