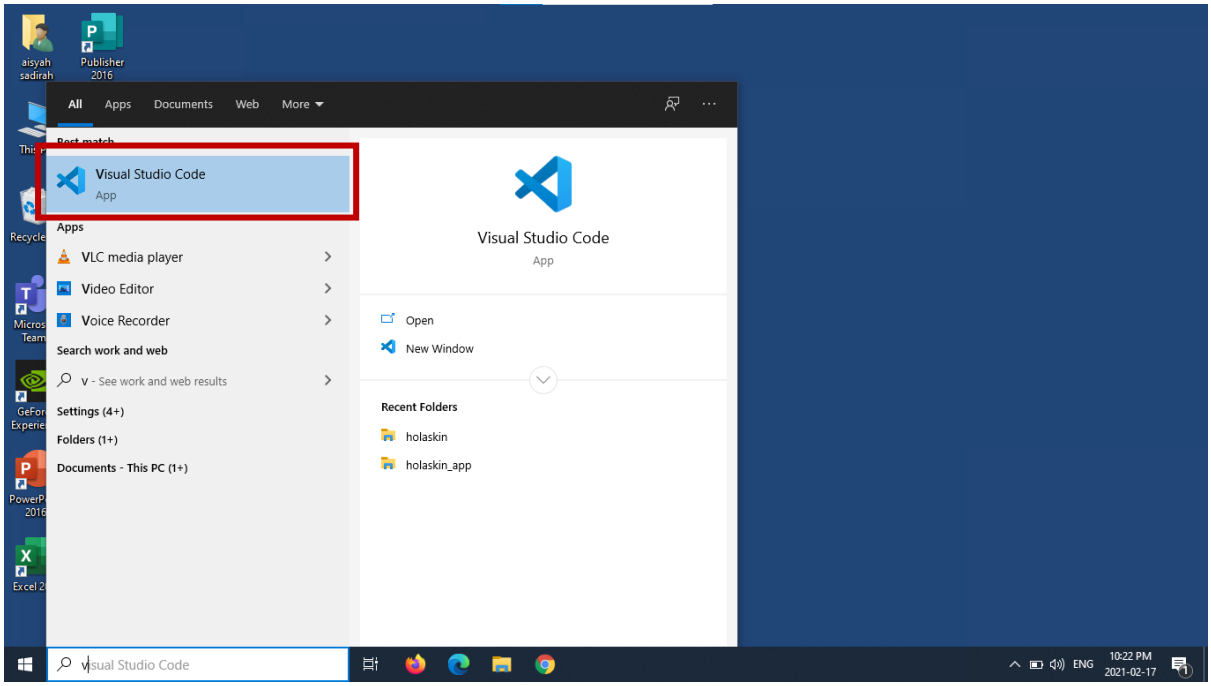
Nur Aisyah Sadirah binti Aladi (2019722557)

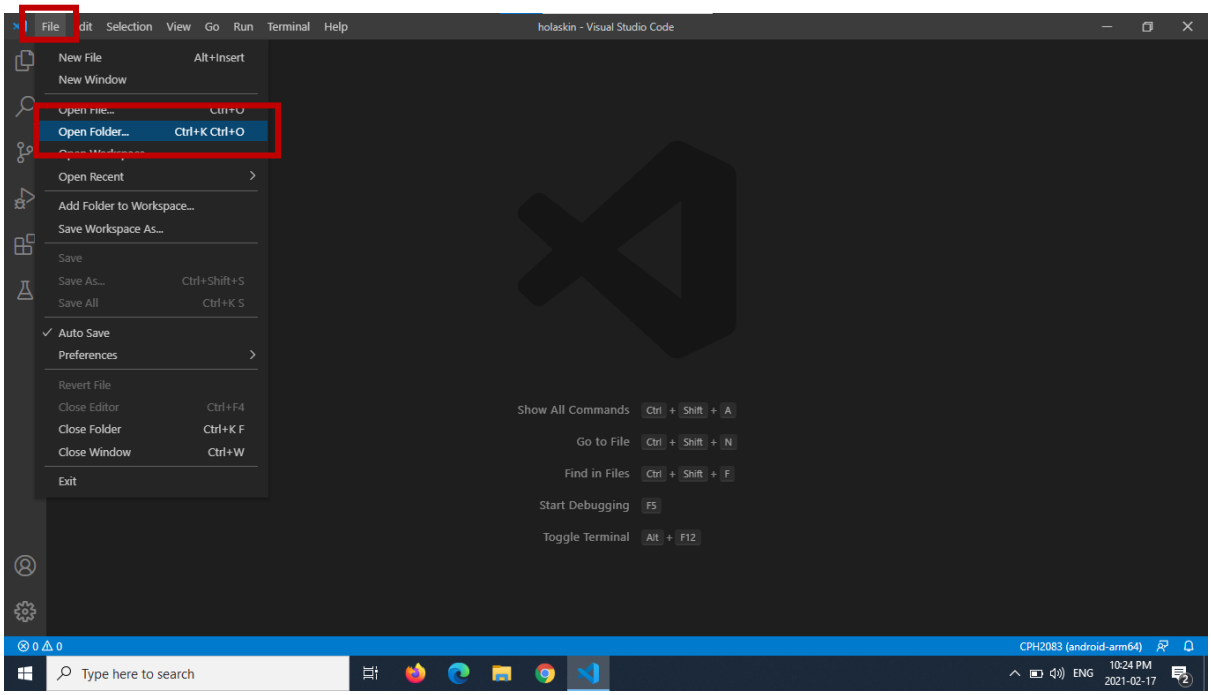
Skincare Product Recognition System using Convolutional Neural Network

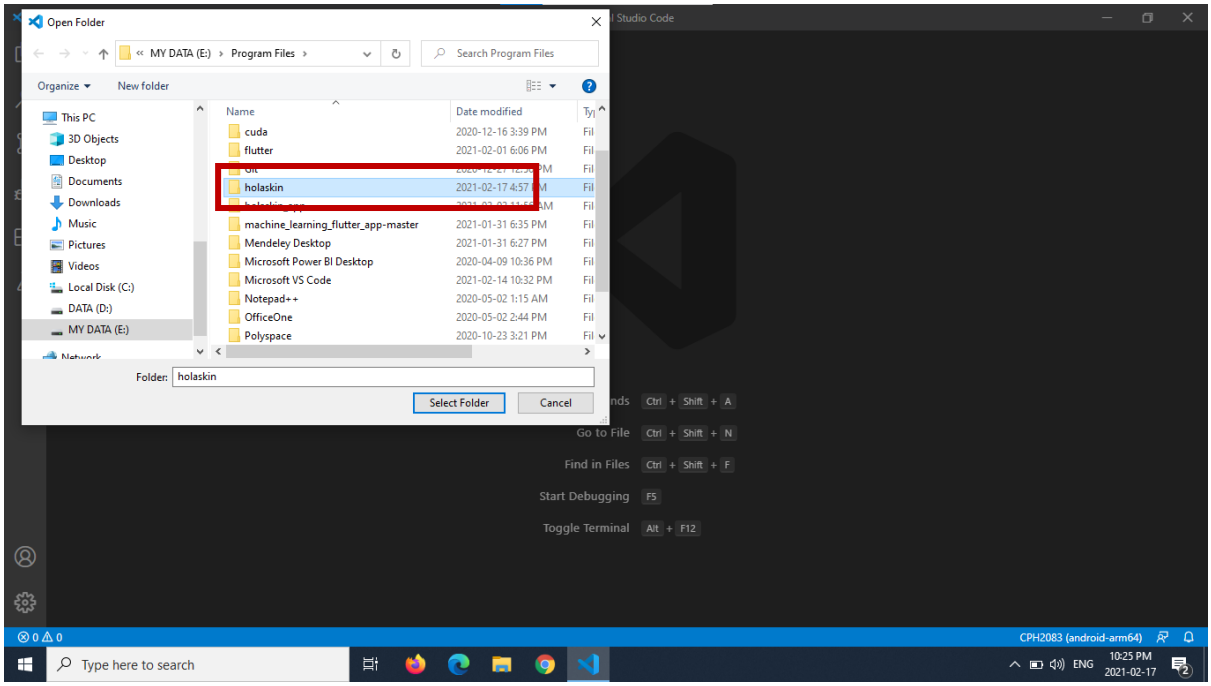
To run the mobile application:

1. Open Visual Studio Code/ Android Studio.

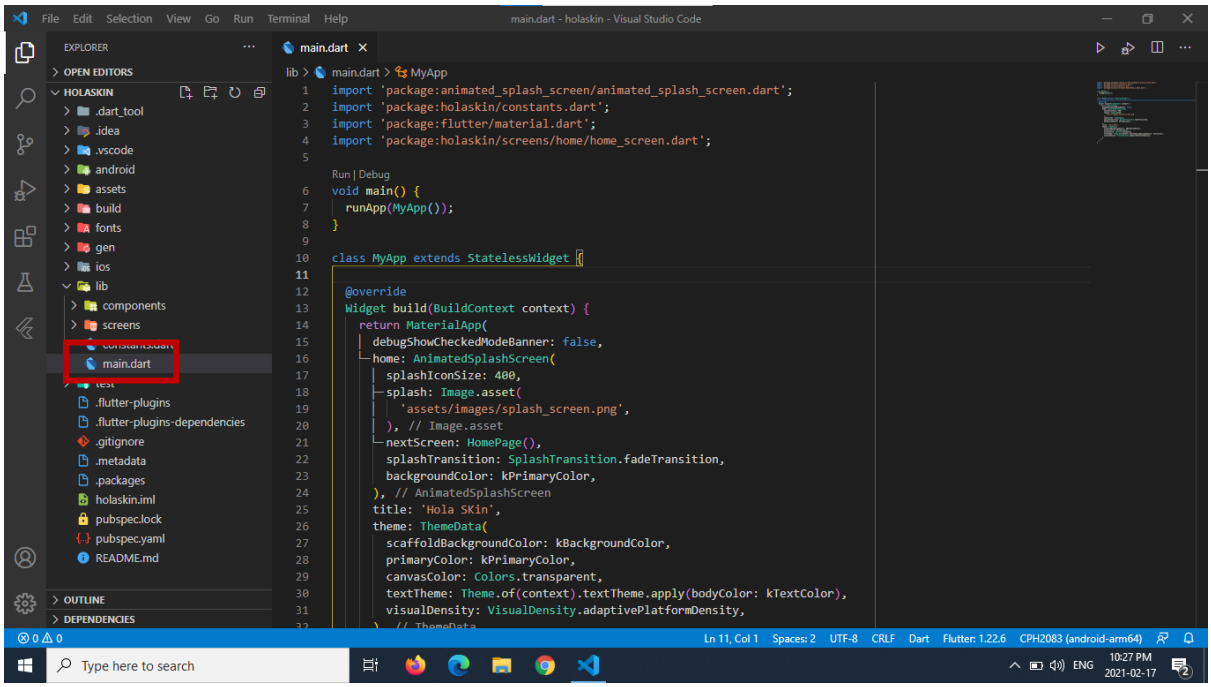


2. Click File on the top navigation bar and open holaskin folder that you extracted to your PC/ laptop.

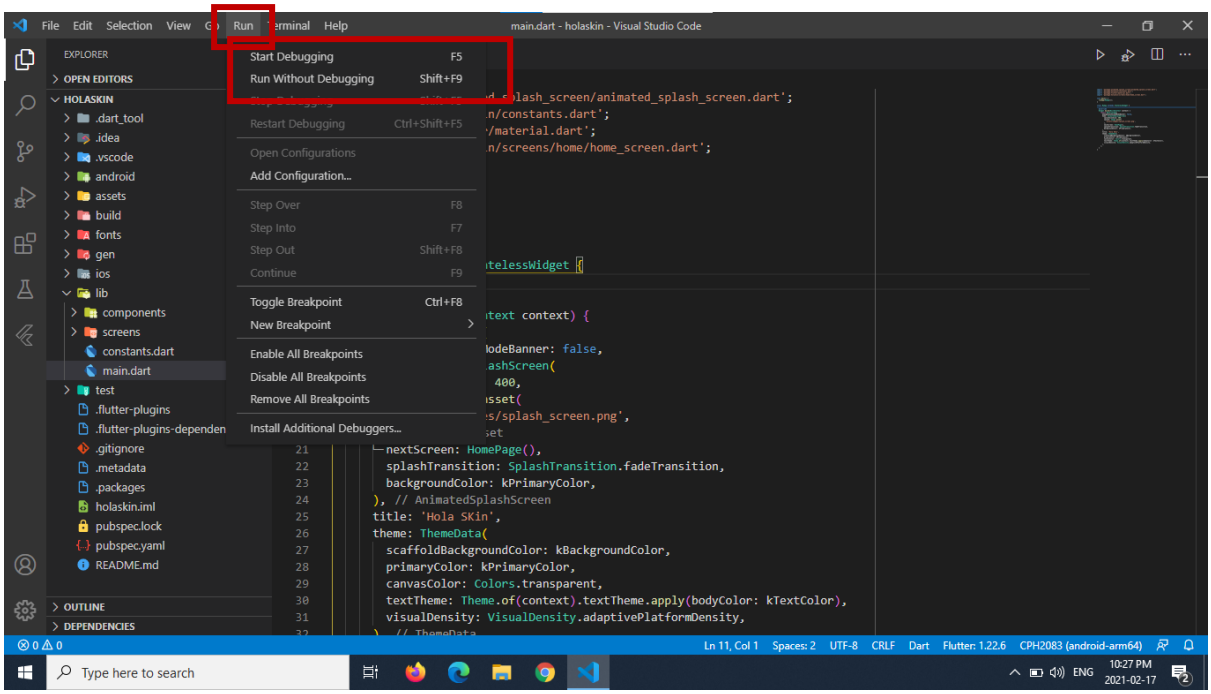




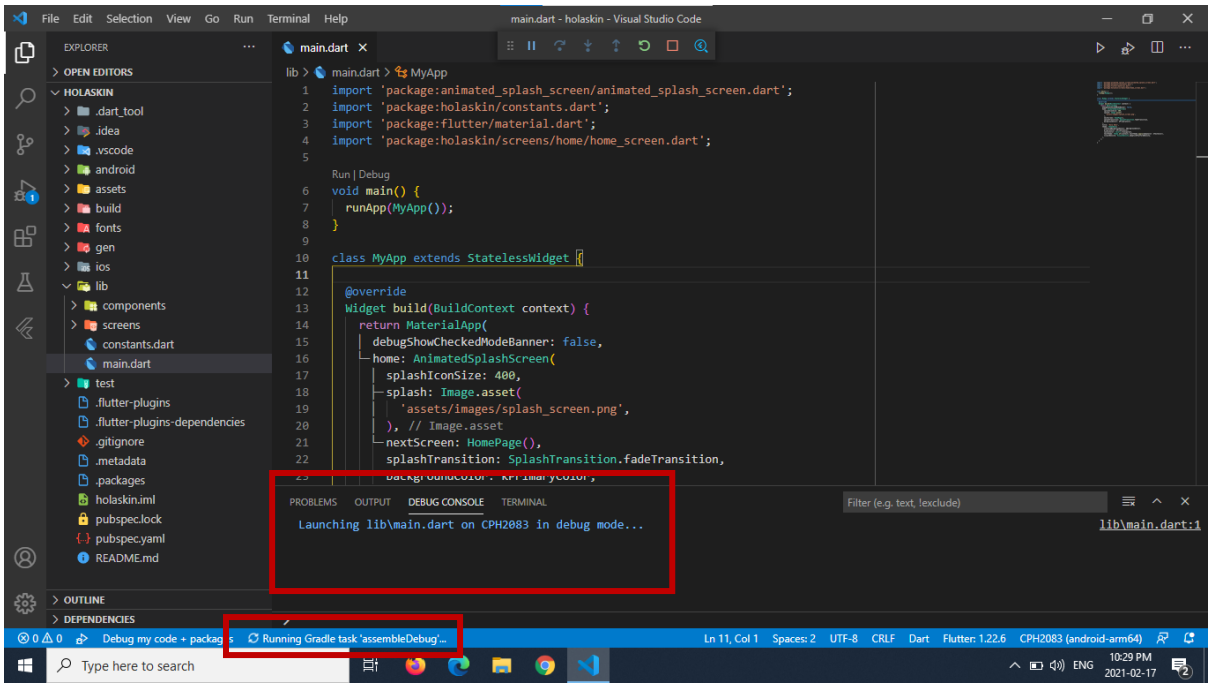
3. Then, navigate to main.dart file in holaskin folder > lib.



4. On the top navigation bar, click Run and then select Run Without Debugging.



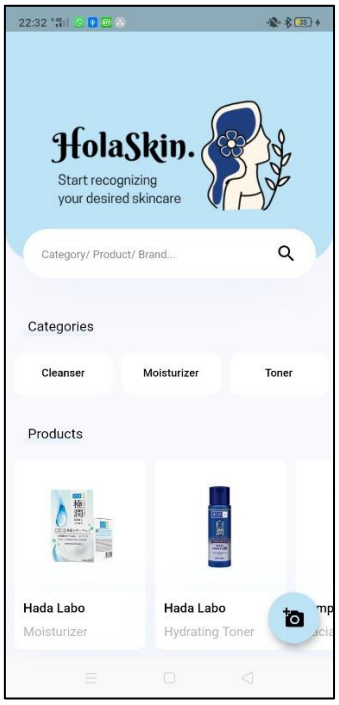
5. It might take awhile when you first run the application, but you can monitor the output or any errors at the debug console. The mobile apps will automatically be prompted when it is done.

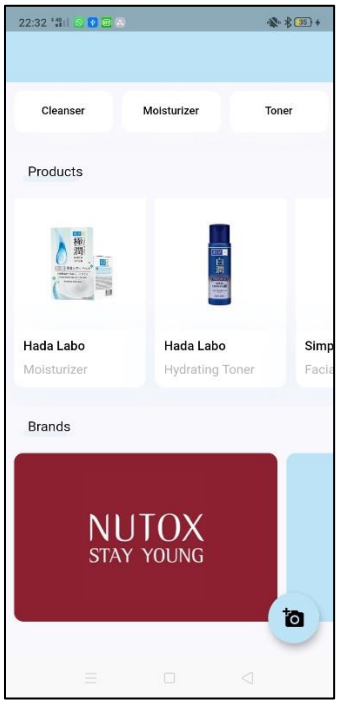


How the mobile application works:

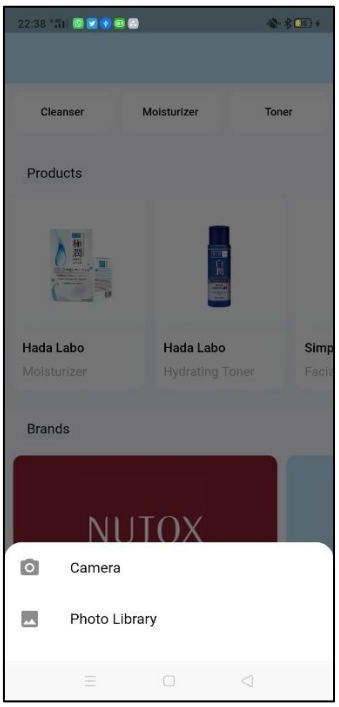
1. After you run main.dart file, your device (emulator/ USB debugging) will prompt the splash screen of the mobile application.

2. The mobile application is designed to ease user in choosing their skincare products that they want to recognize. User can find the product based on categories, products itself and brands.

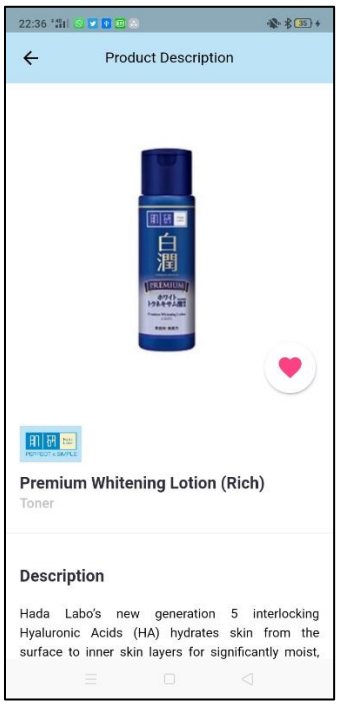




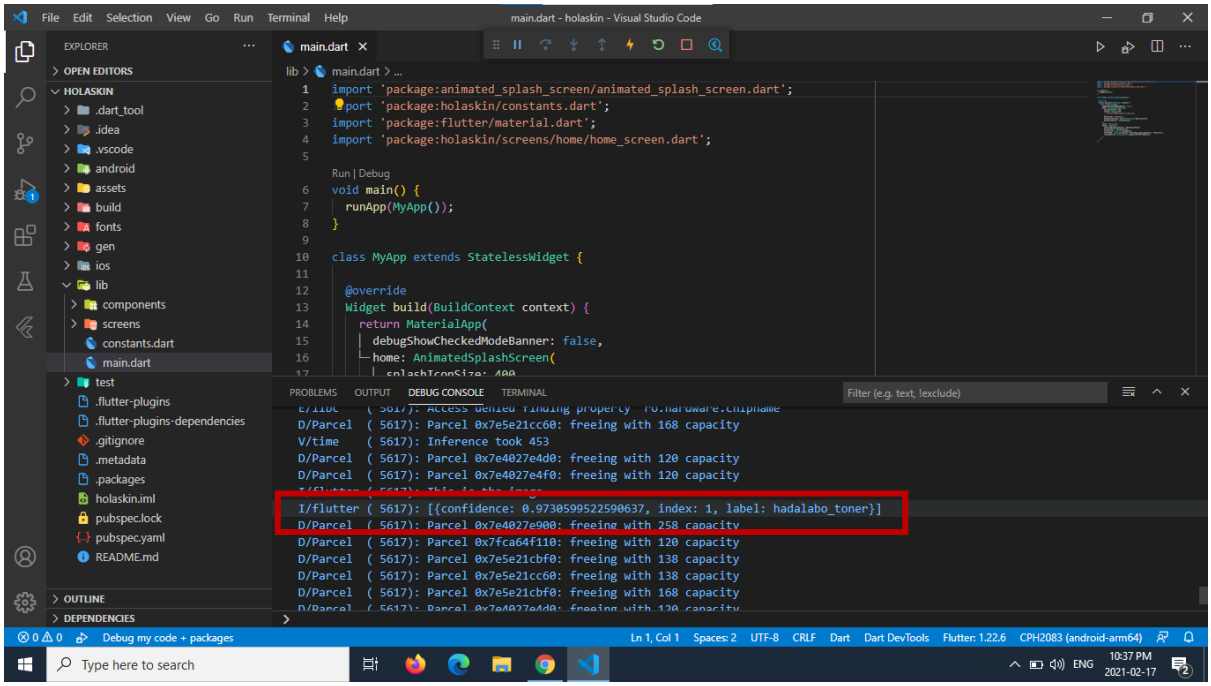
3. To classify and recognize skincare product, user can choose to take picture or choose picture from the device library. (Note: For now, the apps can only classify six categories of skincare product).



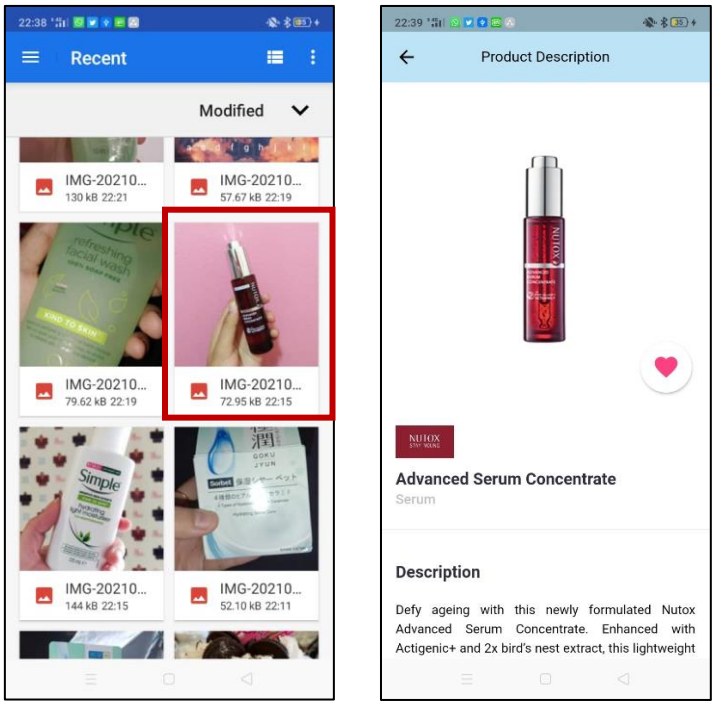
4. This is the example of taking picture of skincare product (I am using Hada Labo Toner). The apps will then direct user to the recognized product description. User can view product details, its skin concerns and detailed ingredients.

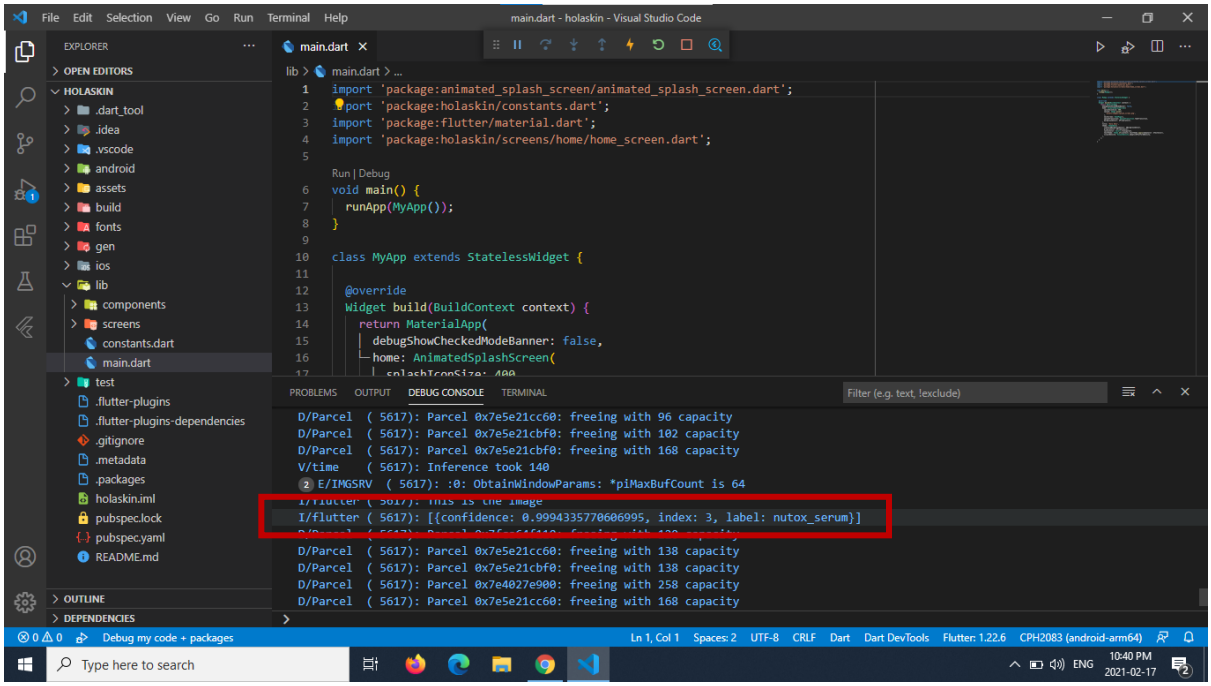


5. From the debug console at Visual Studio Code/ Android Studio, you can see the prediction made by CNN model and the accuracy. Index is the index of the class label. In this case, Hada Labo Toner is index 1 in the class label (you can see the class label in labels.txt file in folder assets)



6. You also can try choosing skincare product from device's library to classify and recognize skincare products. (For example, I choose an image of Nutox Serum).




File Edit Selection View Go Run Terminal Help
main.dart - holaskin - Visual Studio Code
EXPLORER
OPEN EDITORS
HOLASKIN
.dart_tool
.idea
.vscode
android
assets
build
fonts
gen
ios
lib
components
screens
constants.dart
main.dart
test
.flutter-plugins
.flutter-plugins-dependencies
.gitignore
.metadata
.packages
holaskin.iml
pubspec.lock
pubspec.yaml
README.md
OUTLINE
DEPENDENCIES
main.dart
lib > main.dart > ...
1 import 'package:animated_splash_screen/animated_splash_screen.dart';
2 import 'package:holaskin/constants.dart';
3 import 'package:flutter/material.dart';
4 import 'package:holaskin/screens/home/home_screen.dart';
5
Run | Debug
6 void main() {
7 runApp(MyApp());
8 }
9
10 class MyApp extends StatelessWidget {
11
12 @override
13 Widget build(BuildContext context) {
14 return MaterialApp(
15 debugShowCheckedModeBanner: false,
16 home: AnimatedSplashScreen(
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Filter (e.g. text, !exclude)
D/Parcel (5617): Parcel 0x7e5e21cc60: freeing with 96 capacity
D/Parcel (5617): Parcel 0x7e5e21cbf0: freeing with 102 capacity
D/Parcel (5617): Parcel 0x7e5e21cbf0: freeing with 168 capacity
V/time (5617): Inference took 140
2 E/IMGSRV (5617): :0: ObtainWindowParams: *piMaxBufCount is 64
I/flutter (5617): [{confidence: 0.9994335770606995, index: 3, label: nutox_serum}]
D/Parcel (5617): Parcel 0x7e5e21cc60: freeing with 138 capacity
D/Parcel (5617): Parcel 0x7e5e21cbf0: freeing with 138 capacity
D/Parcel (5617): Parcel 0x7e4027e900: freeing with 258 capacity
D/Parcel (5617): Parcel 0x7e5e21cc60: freeing with 168 capacity
Debug my code + packages
Ln 1, Col 1 Spaces: 2 UTF-8 CRLF Dart Dart DevTools Flutter: 1.22.6 CPH2083 (android-arm64)
Type here to search
ENG
10:40 PM
2021-02-17