

WHATS YOUR TONGUE SAYING: DEVELOPMENT OF A MOBILE APP FOR TONGUE IMAGE STORAGE AND A DESKTOP GUI TO EXTRACT A DIAGNOSIS FROM AN IMAGE OF A TONGUE

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In eastern medicine, particularly acupuncture, the appearance of the tongue is used as a diagnostic tool. The problem is that every person may describe the same tongue differently. The solution is easy, take a picture. The question is then what to do with that picture. In the first part of my project I created a mobile app for image storage. The app allows tongue images to be categorized by patients and then within that categorized by each visit or time that the tongue is used for a diagnosis. The app was created on android studio and uses firebase as a database. In the second part of my project I attempted to eliminate the need to get a diagnosis from an acupuncturist. For this a desktop GUI was created that takes an image as an input. The image is then displayed and a diagnosis is shown in a panel next to the image. The GUI and the program were created using MATLAB. 21 images were used to test the program. Only 4 of the images were able to completely isolate the tongue for further analysis. 11 images were able to isolate part of the tongue. The 4 images that could isolate the tongue were the only 4 images where flash was used. All 4 images did give a correct diagnosis.