

Project Proposal			
교과목명	창직종합설계 프로젝트2	교과목번호	101812-5
학점(설계)/시수	3학점/3시수(이론2/실기1)		
개설학과(학년)	컴퓨터공학전공(4학년)	담당교수	박준철 교수님
과제명	가제 : 거북목 경고(Tech Neck Alert)		
팀명	정진우		
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1. Project Overview

- Are you sitting in front of the computer more often due to the COVID-19 ?
Is your vertebrae healthy while using the computer?
When you work in front of a computer for a long time, we help you keep the right posture.

2. Background and Motivations

- When we work on computers for a long time, we bend and strain the upper part of the spine. This happens when we are not aware, so it is not easy to correct our posture on our own. This project came to think of it from the user experience to get help to maintain the right posture even if I use a computer for a long time.

3. Component Technologies

- python : Basic development environment.
- OpenCV : Image processing/image processing.
- Modeling : Google mnist / Teachable machine
- HTML/CC~ Javascript : Web

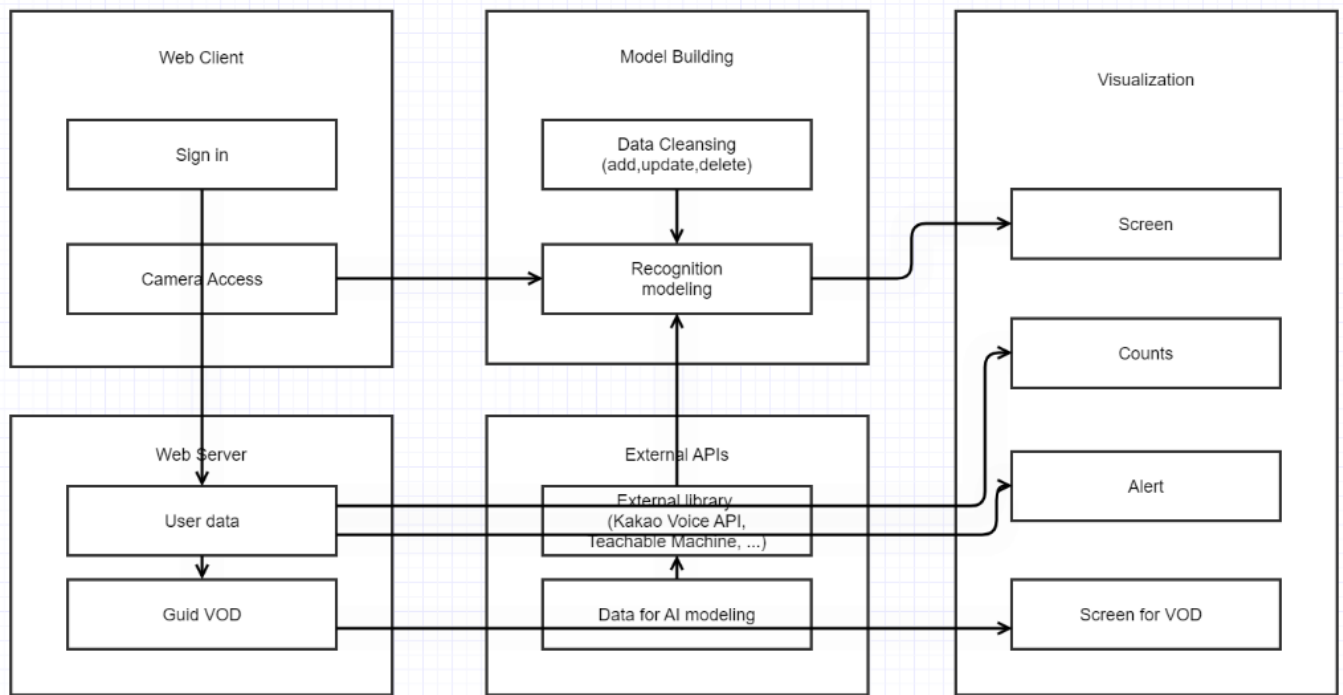
4. Detailed Design and Implementation

4.1 Requirement Analysis

- 1. The user is asked to allow access to the camera
- 2. The camera record the posture while the user is on the computer.
- 3. It recognizes the user's proper posture and tech neck posture.
- 4. The moment the user changes from the regular posture to the tech neck posture, the count value is raised.
- 5. Whenever the count value rises, a warning window is displayed to inform the user that they has a theck neck.
- (6.) When the count value exceeds 10, a pop-up window is displayed and a tech neck stretching guide video is played.

4.2 System Design (Synthesis and Analysis)

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4.3 Development Environment

- MacOS, window both
- IDE : jupyter-notebook(on Mac), pycharm(on Windeow), notepad++(html~css), VSC(Javascript)
- Language : python for Alg, HTML,CSS,Javascript for Web, OpenCV for data processing, Teachable Machine for Modeling

4.4 Test and Demonstration Plan

- github hosting
- test on several different lap-tops situation.

5. Team

- on my own, git hub commit

6. Weekly Plan (per Team Member)

mission \ week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
img recognition model	✓															
posture classification	✓															
count function																
log in system																
database for user data																
Alert (sound/ pop up)																
working on web																
test with various users																
(+) streching guide VOD																
(+) game with streching																

-																
-																