

Backend Facial Analysis

Functional/Requirement **Specification**

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By: Backend Facial Team

Introduction:

This paper is about the functional requirements of analyzing facial expressions which is the backend system.

Purpose:

The purpose of this specification is to inform what the requirements are for the Backend Facial module, and the intended audience is the Frontend and web service teams in order to send correct input and be informed about the output.

Scope:

Detects faces and analyzes the overall emotion of a video and sends it to the frontend.

Product Functions:

The function of the module is to interpret a person's emotion in a video recording. To achieve the product function, the module utilizes Microsoft Azure Face API to detect facial emotions.

User Characteristics:

The module has two primary users: the interviewee and the interviewer. The interviewee can use the module through web services, and the interviewer uses the module to analyze the interviewee. The interviewee can be diverse across all ages and backgrounds because the module allows all industries to use it. The interviewer is the hiring agency or human resource department of a company. The interviewer has no requirement to be a facial analysis specialist; hence, the module should return straightforward emotion with no excessive details.

Assumptions and Dependencies:

The key to the module's success is connecting to the Microsoft Azure Face API. The developer should be familiar with the inputs and outputs of the Face API, and it is essential to do a black box testing on the Face API.

Specific Requirements:

The programming language required to connect to the Face API is C#. Hence, the program should be written in C#. The module depends on the subscription key and the access to the Face API, which should be registered and complete before testing.

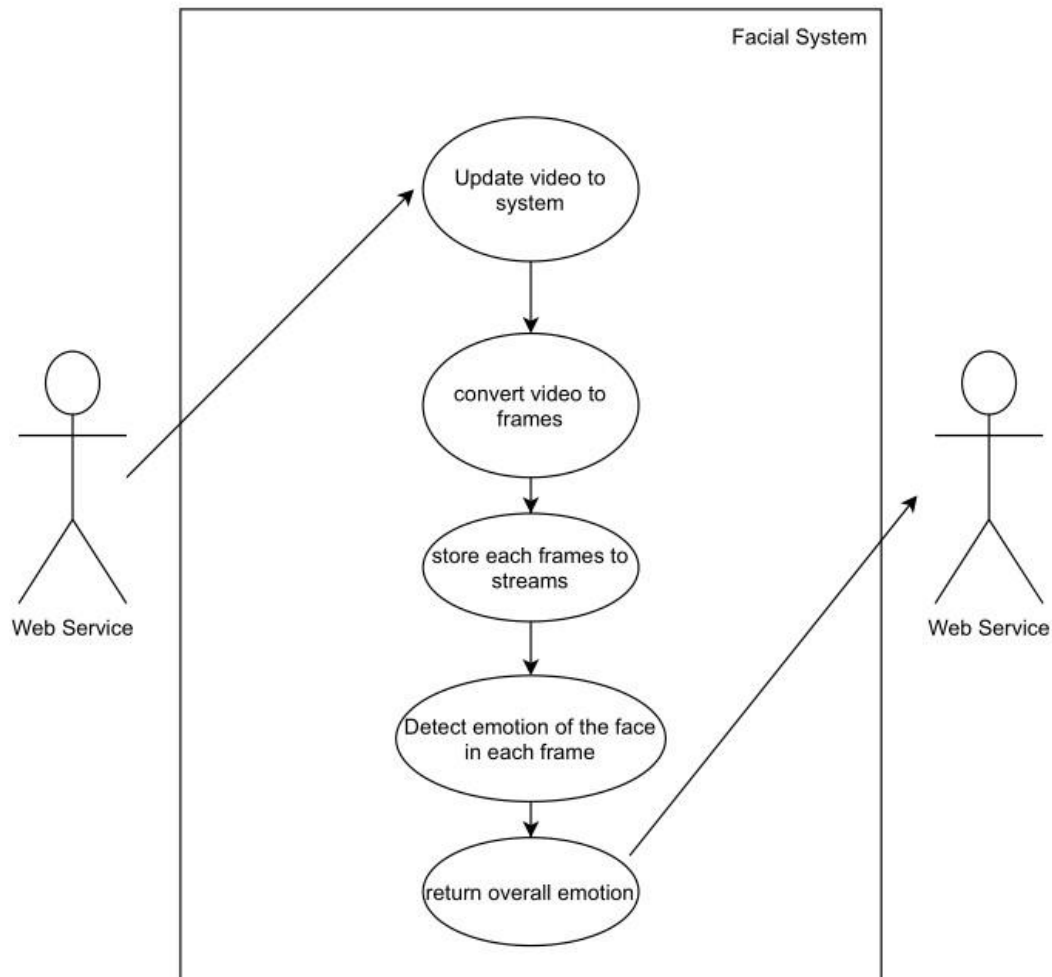
External Interface Requirement:

The user leverages the web services to use the module. The module requires one or more video files to process. Hence, the web service must pass the video files to the module. The module will send back a string of the most occurring emotions.

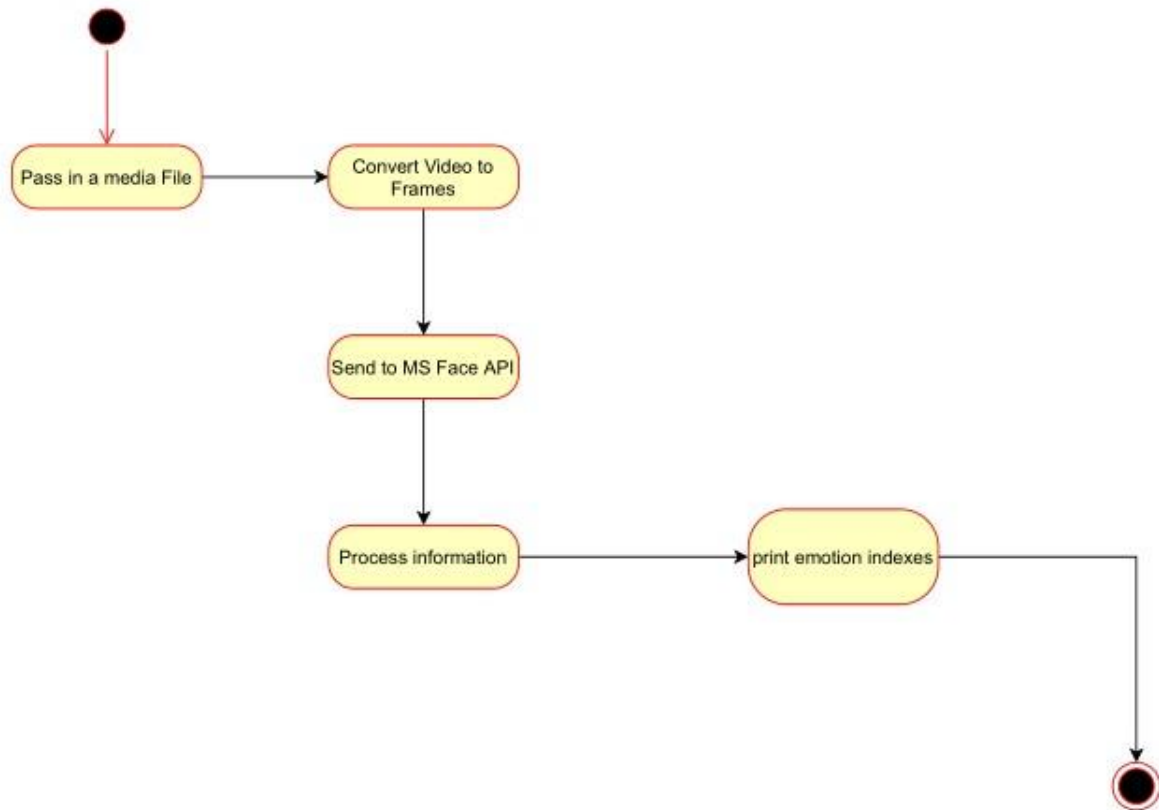
Software Product Features:

Use Case

Purpose:



Activity Diagram



Domain Object Model