Software Design Document

Caricatur App

University POLITEHNICA of Bucharest

Faculty of Automatic Control and Computers

„Managementul Proiectelor Software”

Contents

Document’s purpose
The purpose of this document is to clearly describe the solution implemented by us for the application Carricatur App.

General description
The implemented application receives a portrait picture as input, identifies the facial components in the picture, applies user-selected filters and the output is a caricature of the initial image.

Team
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Technologies
OpenCV

Python 3.5

Version control
Github: https://github.com/DianaVlad/Proiect2MPS

Architectural and component-level design
System’s architecture
Our application has the following structure:

Facial components detection: based on machine learning classifiers this component identifies facial components, like nose, eyes, mouth.

Filters component: it receives the image from the previous component and applies one or more of the following filters:

- Edgepreserve
- Pencilsketch
- Water
- Greayscale
- Blackwhite
- Jet
- Hot
- Sepia

- Enhance
- Blur
- Blue
- Green
- Red

And then it returns the modified image.

User interface model

Flow diagram

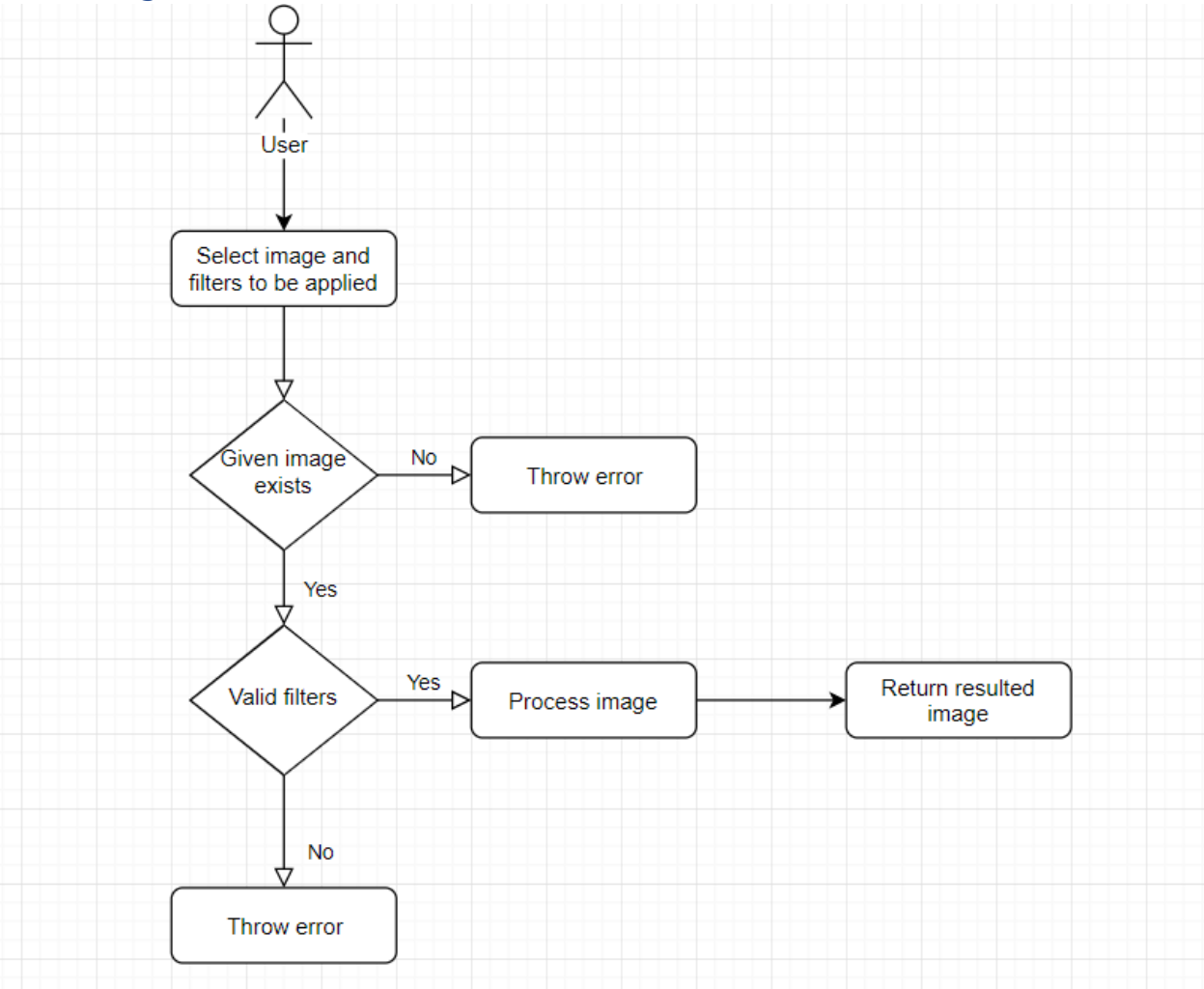

Fig 1. Application workflow

Planning

We used github projects for task management:

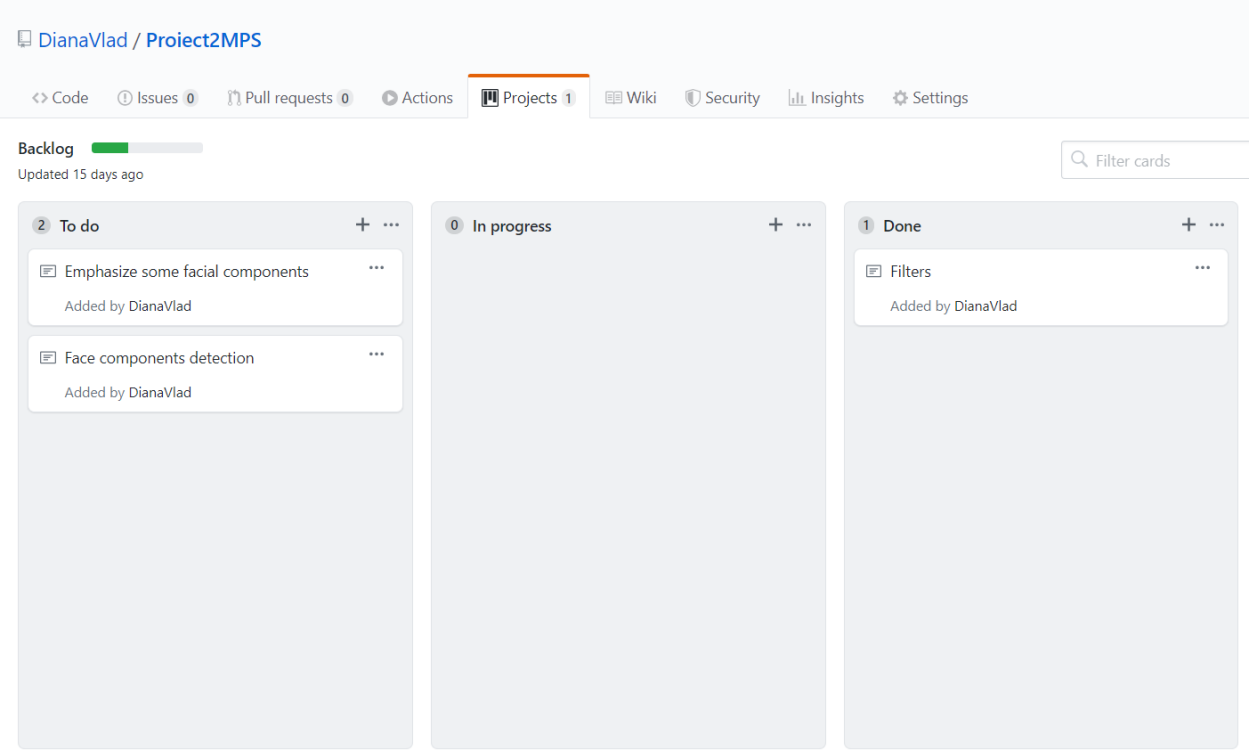

Fig 2. Github project