Apples

A demo of some computer vision and neural network capabilities. Uses OpenCV and Detectron2.

Installation

The project consists of two parts that can be installed and used separately. Additionally a prebuilt project is available in pages branch.

Python

The Python part is used for neural network training and export. Note that these instructions have only been tested with Micromamba on Ubuntu 20.04, other distros should work, Miniconda may have problems though.

1. Create and activate the environment

```
micromamba env create -f environment.yml
micromamba activate apples
```

2. Clone Detectron2 and some requirements

```
cd ..
git clone https://github.com/facebookresearch/mobile-vision
git clone https://github.com/facebookresearch/detectron2
git clone https://github.com/facebookresearch/d2go
```

3. Install Detectron2 and some requirements one by one

```
cd mobile-vision
pip install -e .
cd ../detectron2
pip install -e .
cd ../d2go
pip install -e .
cd ../apples
```

4. Done, the project is ready to use, see the Python modules for further configuration

```
# use this for training
python -m py.runner
# or this for annotations
python -m py.annotate
```

JavaScript

The JavaScript part is used for OpenCV and UI. Note that we use Volta for Node management but other methods should do.

1. Install all requirements

```
npm ci
```

2. Yup, that's it, the project is ready to use, note that the npm scripts effectively execute the bash ones

```
# use this for development
npm run parcel-start
# or this for building
npm run parcel-build
```

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