

# PixelCut

(web-package mode)

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## 1. System requirement

### 1) OS: Ubuntu 24.04.2 LTS

Kernel: Linux 6.8.0-53-generic

### 2) CPU: 12 threads (Hyper threading: 6core, 12 threads)

model name: Intel(R) Xeon(R) E-2336 CPU @ 2.90GHz

### 3) HDD: 1.8 TB (Logical)

### 4) Memory: 32GB

## 2. Installation

### 1) openssl (1.1.1)

```
$ curl -O https://www.openssl.org/source/openssl-1.1.1s.tar.gz
```

```
$ tar xf openssl-1.1.1s.tar.gz
```

```
$ cd openssl-1.1.1s
```

```
$ ./config --prefix=/usr/local/openssl -openssldir=/usr/local/openssl  
shared
```

```
$ make && sudo make install
```

### 2) python (3.10.6) and packages(opencv)

```
$ wget https://www.python.org/ftp/python/3.10.6/Python-3.10.6.tgz
```

```
$ tar xf Python-3.10.6.tgz
```

```
$ cd Python-3.10.6
```

```
$ ./configure --prefix= ~/PixelCut/web/v0.01/python/3.10.6 W
```

```
--with-openssl=/usr/local/openssl W
```

```
--enable-optimizations
```

```
$ make && sudo make altinstall
```

```
$ ~/PixelCut/web/v0.01/python/3.10.6/bin
```

```
$ ln -s pip3 pip
```

```
$ pip install opencv-python
```

```
$ pip install beautifulsoup4
```

```
$ pip install Pillow
```

```
$ pip install imutils
```

```
$ pip install pandas
```

```
$ pip install pytesseract
```

- Installation Tesseract 4.x

```
$ sudo apt install tesseract-ocr
```

```
$ sudo apt install libtesseract-dev
```

```
$ sudo apt-get install liblzma-dev
```

### 3) JAVA (openjdk, 17.0.2)

```
$ wget https://download.java.net/java/GA/jdk17.0.2/dfd4a8d09857  
49f896bed50d7138ee7f/8/GPL/openjdk-17.0.2_linux-x64_bin.tar.gz
```

```
$ tar xvf openjdk-17.0.2_linux-x64_bin.tar.gz
```

```
$ cp -rf jdk-17.0.2 ~/PixelCut/web/v0.01/java/
```

### 4) Webserver (v10.1.36)

```
$ wget https://archive.apache.org/dist/tomcat/tomcat-10/v10.1.36/bin/  
apache-tomcat-10.1.36.tar.gz
```

```
$ tar xvf apache-tomcat-10.1.36.tar.gz
```

```
$ cp -rf apache-tomcat-10.1.36/* ~/PixelCut/web/v0.01/server/tomcat/
```

- For tomcat 80 port

```
$ sudo apt update
```

```
$ sudo apt install authbind
```

```
$ cd ~/PixelCut/web/v0.01/server/tomcat/bin/
```

```
$ vi startup.sh
```

modified script statement

line 60

original: `exec "$PRGDIR"/"$EXECUTABLE" start "$@"`

→ new: `exec authbind --deep "$PRGDIR"/"$EXECUTABLE" start "$@"`

- server.xml

- ① web page home directory

line 145

```
<Context path="/" docBase="/~/PixelCut/web/v0.01/htdocs"
reloadable="true"/>
```

- ② line 70 (80 port)

```
<Connector port="80" protocol="HTTP/1.1"
```

### 5) htdocs (webpage: jsp, servlet)

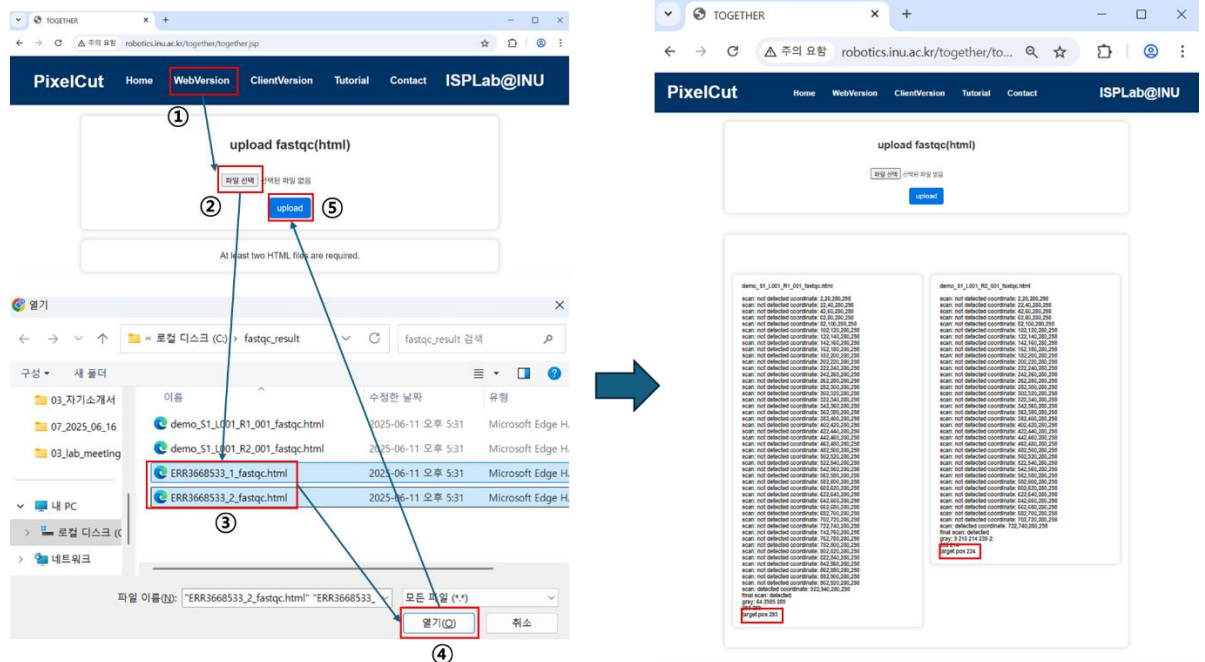
```
$ wget https://github.com/eastbrain/PixelCut/htdocs.tar.gz
```

```
$ tar xvf htdocs.tar.gz
```

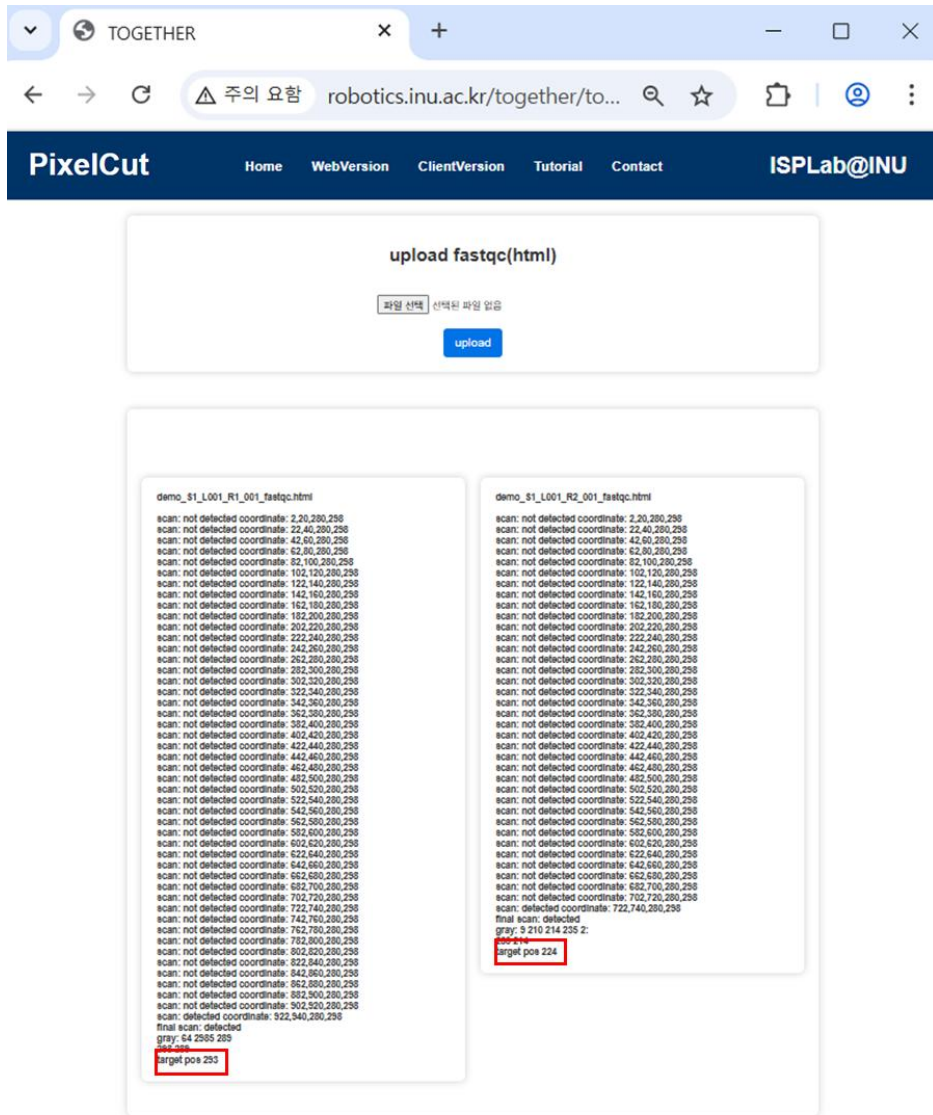
```
$ cp -rf htdocs /home/dongin/PixelCut/web/v0.01/
```

### 3. Operating (web mode)

url: <http://robotics.inu.ac.kr/PixelCut/PixelCut.jsp>



[ image1. PixelCut web mode ]



[ image2. PixelCut web result]