

Static Background Changer for videos

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- 1 Motivation & our goals
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- 3 Development process
- 4 Outcome and future plans

Problem: How backgrounds are removed




How to Remove Green Screen Video Background in Adobe Premiere Pro CC (Tutorial)

793 N lượt xem • 1 năm trước

Justin Odisho ✓

Visit Shop: <https://justinodisho.com/shop> Get Adobe CC: <http://bit.ly/2ekhRiF> Follow me: <https://www.instagram.com/justinodisho> ...

2:16



In Premiere Pro | How To Remove Background Of Video WITHOUT Green Screen AND Masking

781 N lượt xem • 4 năm trước

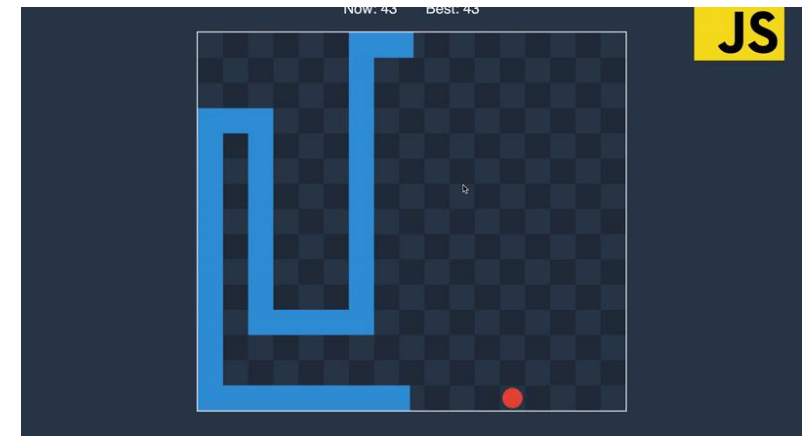
Aneesh Rathi

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<https://www.instagram.com/shotbyaneesh/>

Phụ đề

11:55

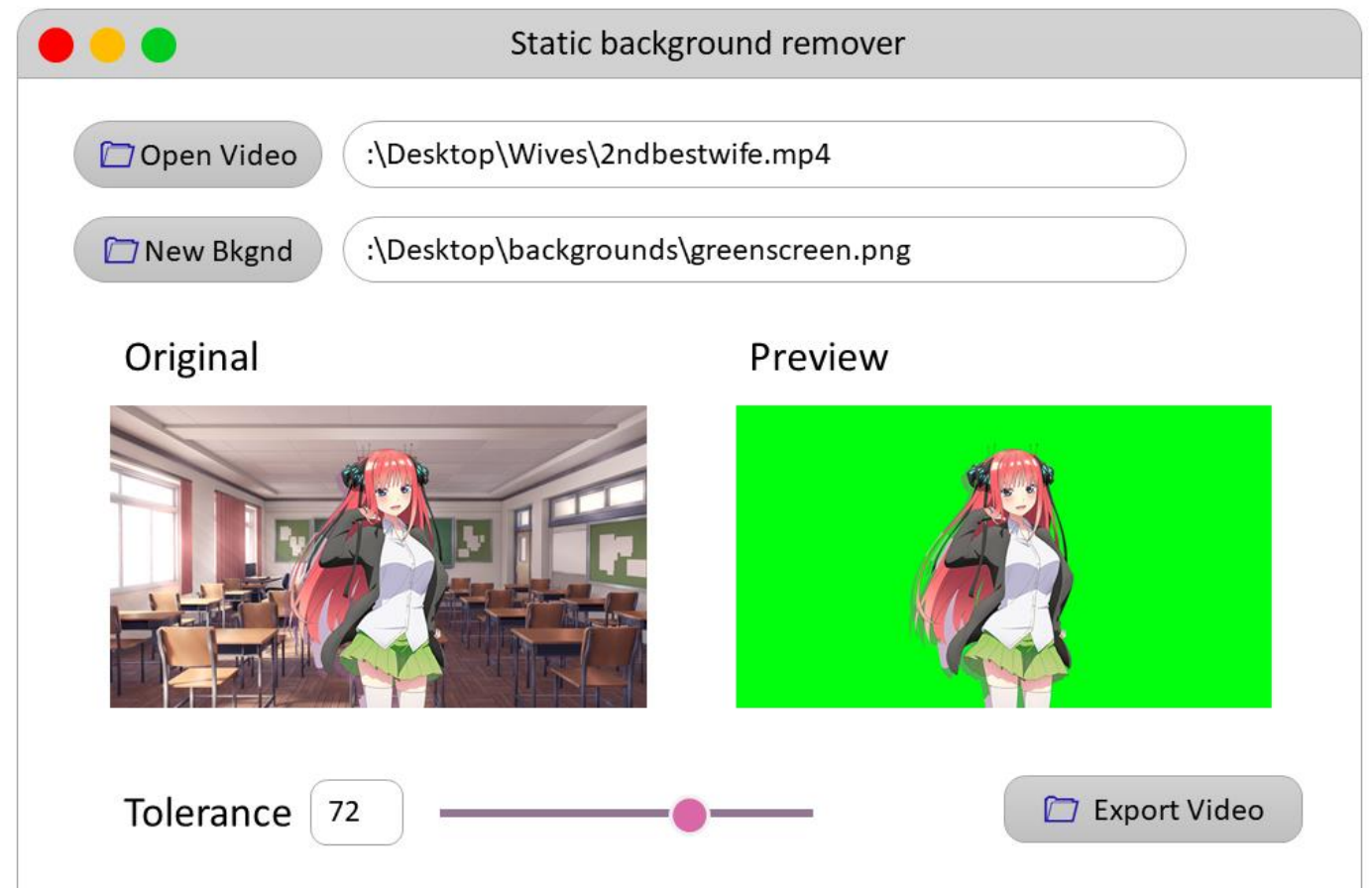
When we need to remove/change backgrounds



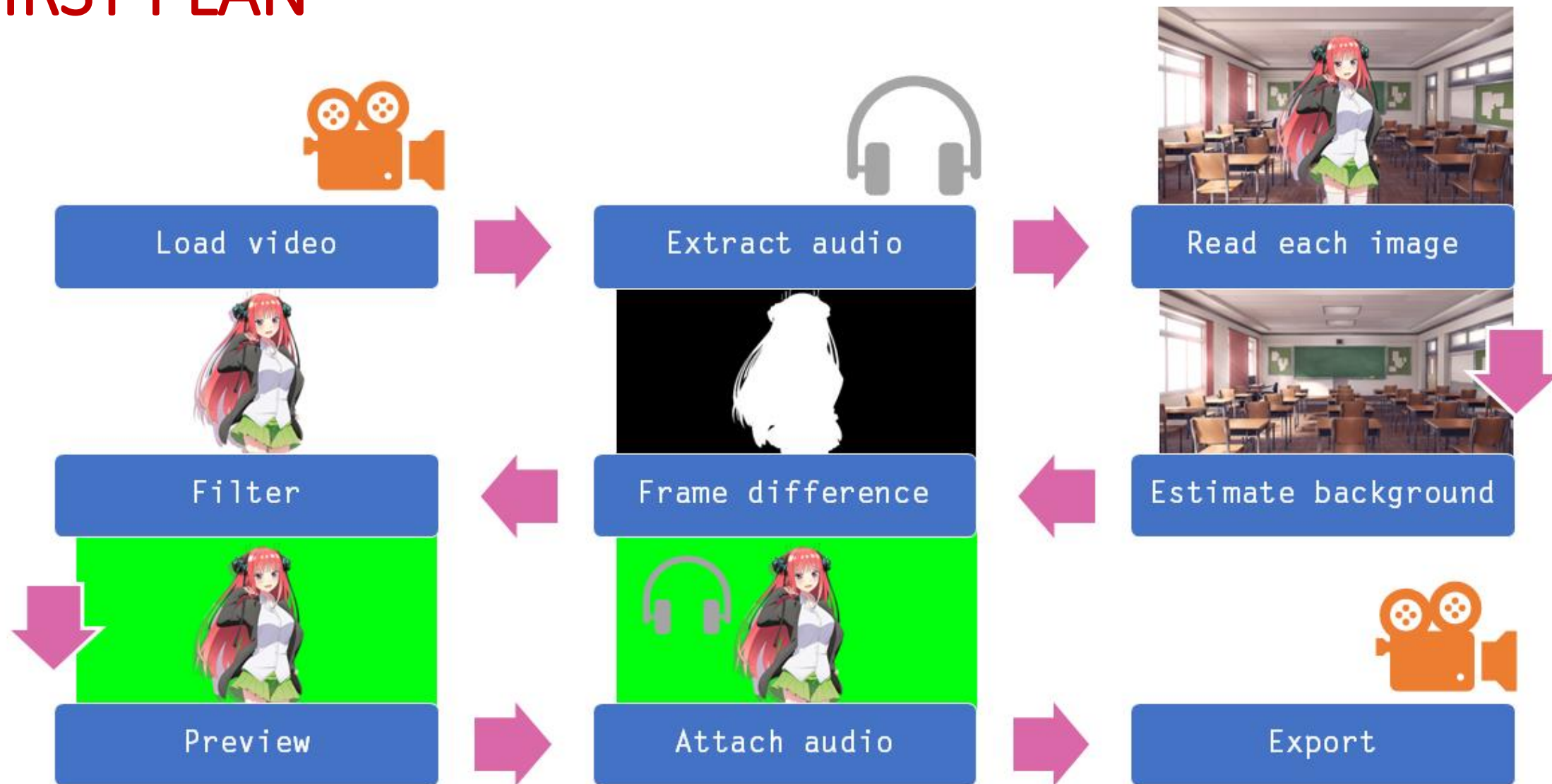
OUR GOAL

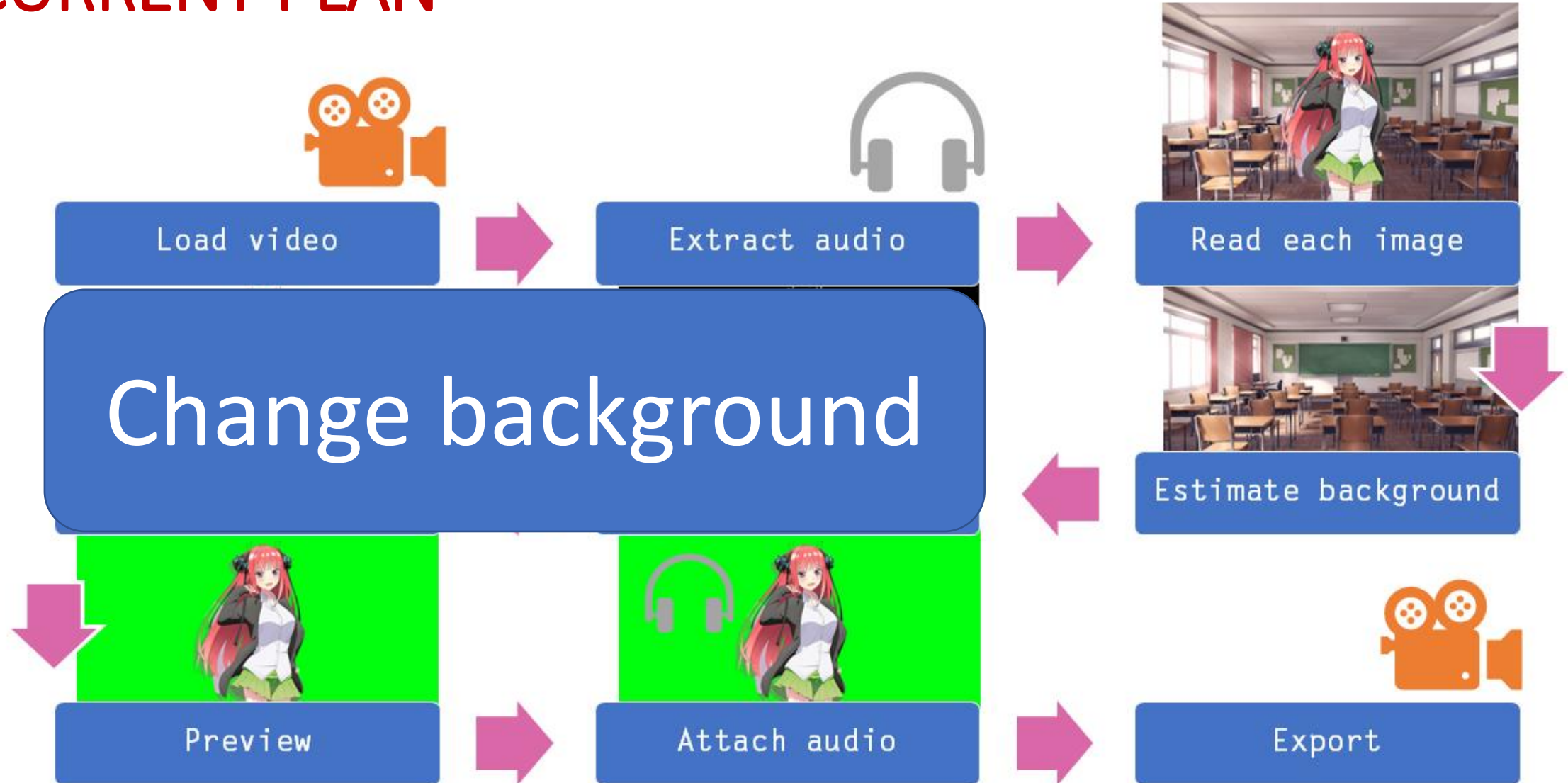
To develop a **Software:**

- Changing/removing static backgrounds
- Fast, straight-forward
- Easy to use

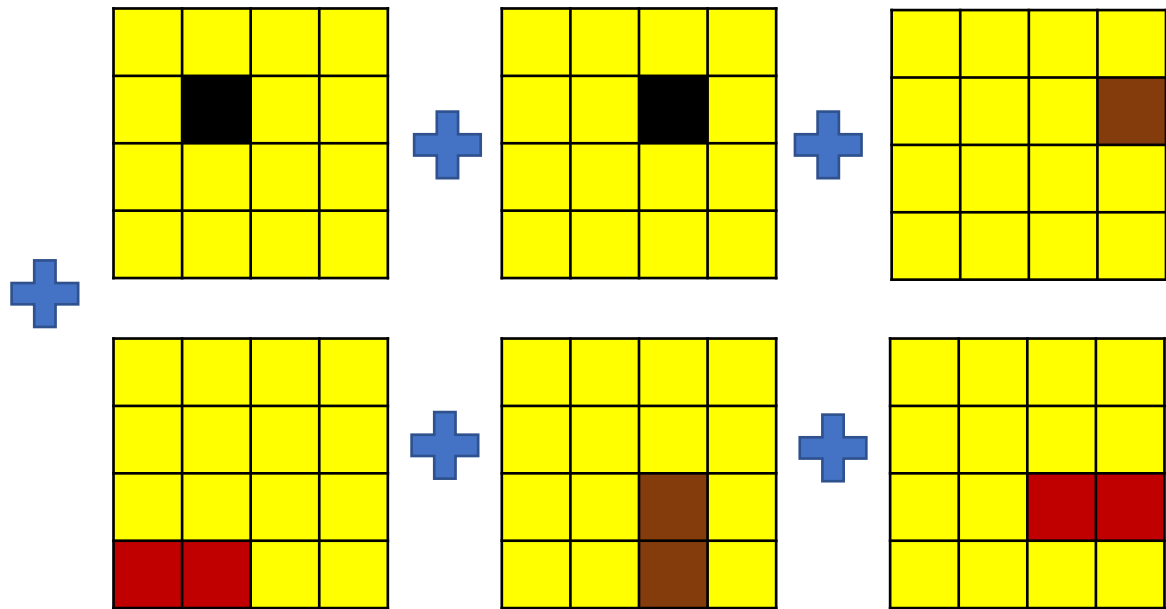


FIRST PLAN





Background estimation



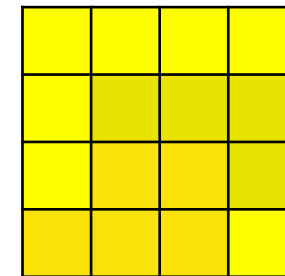
6



Estimate background

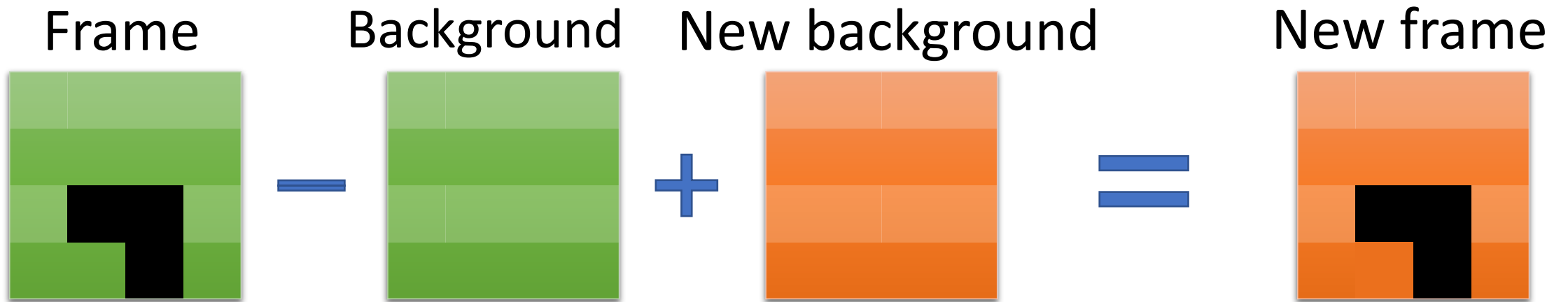
Median

=



Change background

```
cv::Mat addbackground(short tolerance, cv::Mat median, cv::Mat frame, cv::Mat background)
{
    // To overwrite the background to new background in each frame
    // Things are not background remains
    // return the frame with background FwB
    cv::Mat FwB(median.rows, median.cols, CV_8UC3, cv::Scalar(0, 0, 0));
```



Our tools



OpenCV For image processing, treat images as objects



FFmpeg For multimedia

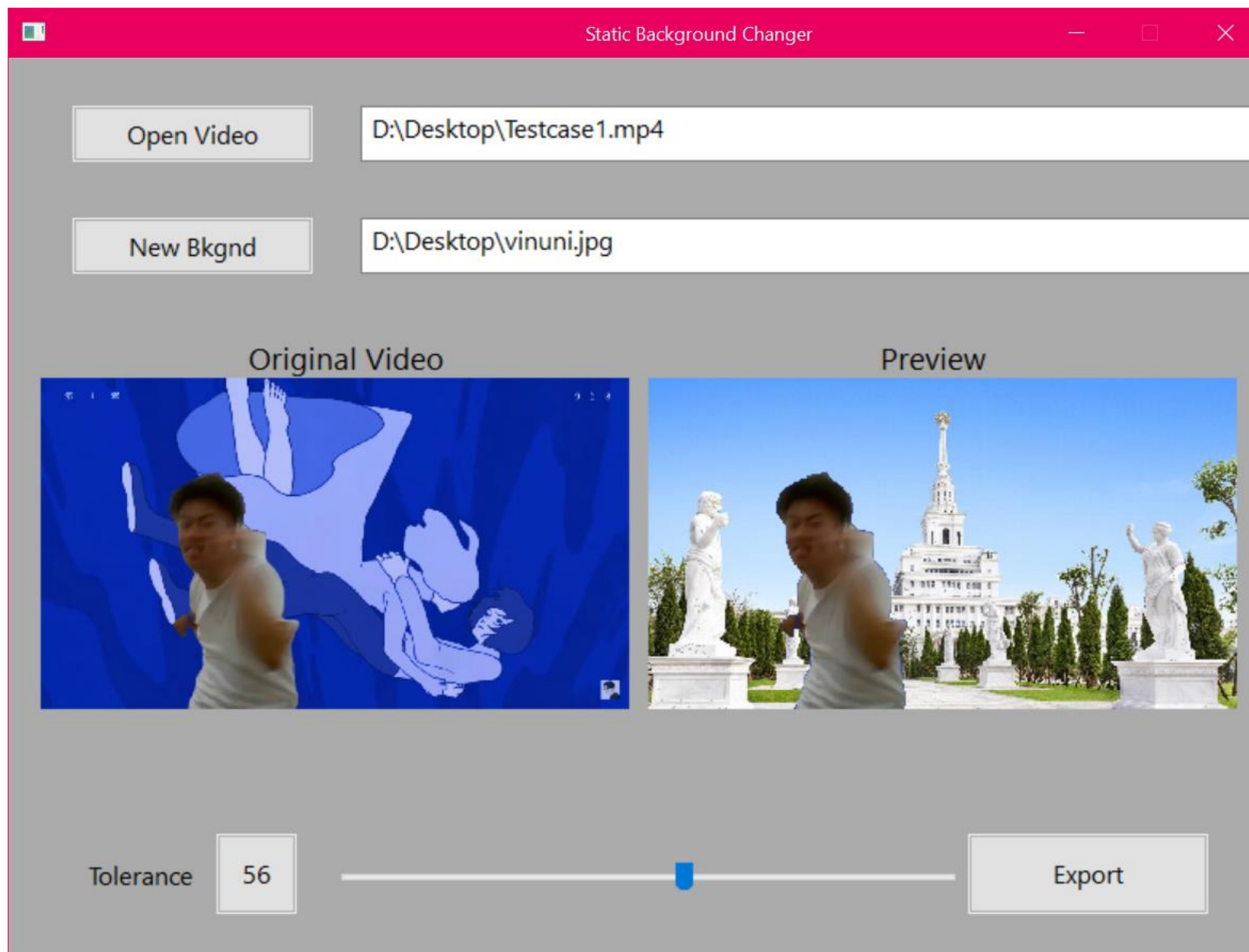


wxWidgets For Graphic User Interface



Visual Studio For coding

Outcome



Outcome

Original video



After changing background





Future improvement

Short term:

- Use other image processing packages and techniques to improve **performance**
- Output video too large, need **compression**

Long term

- **Embedded** as a feature in other tools/ apps
- **Deploy online** as a progressive web-app

Acknowledgement

(2021, June 14). LearnOpenCV – OpenCV, PyTorch, Keras, Tensorflow examples and tutorials. <https://learnopencv.com/simple-background-estimation-in-videos-using-opencv-c-python/>

WxWidgets Team. (n.d.). wxWidgets: Cross-Platform GUI Library. <https://www.wxwidgets.org/>

