



# Cardify





# Agenda

- Introduction
- Product
- Under the hood
- Demo
- Future work
- Get in touch

# Introduction

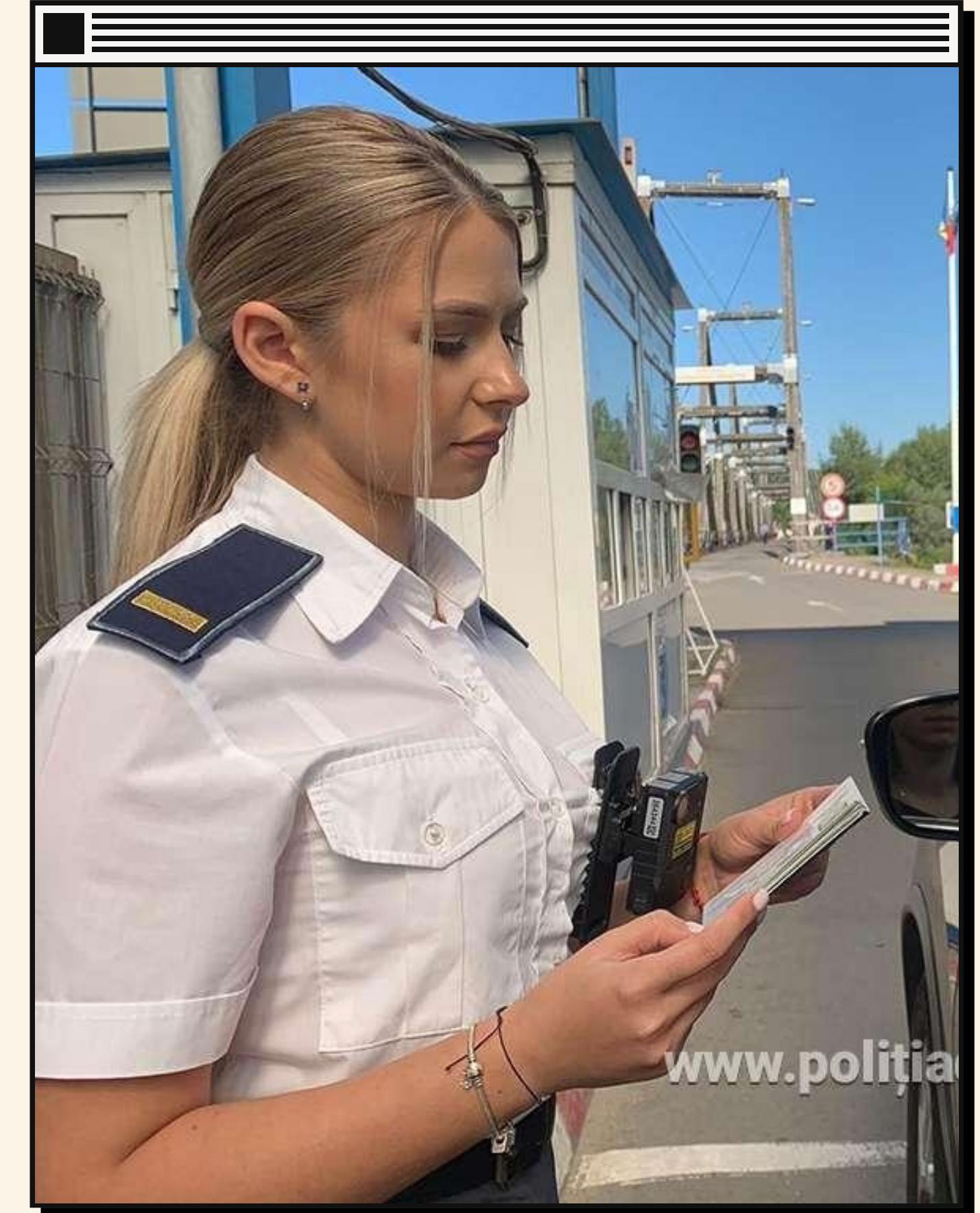
Did you get bored of always verifying the identity of certain people?

Or maybe you do not have the budget to pay somebody specifically for this job?

Maybe you work at border checks and hate when you are still in the office even though your shift ended 3 hours ago?

Maybe sometimes you have the impulse to curse border checks for their slow processing speed?

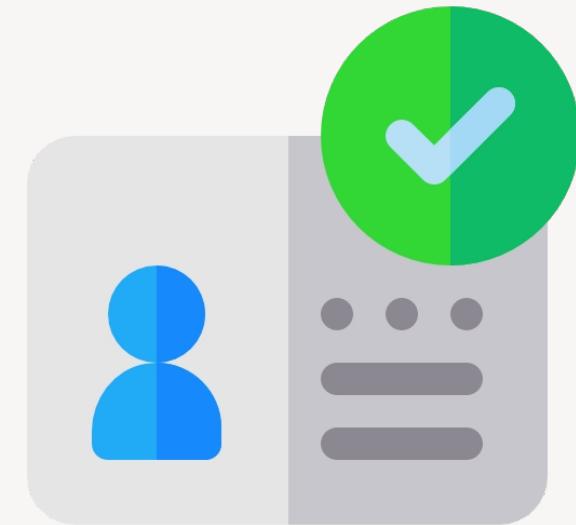
**NO PROBLEM, WE HAVE  
YOU COVERED MATE!**



[www.politia.ro](http://www.politia.ro)



# Cardify

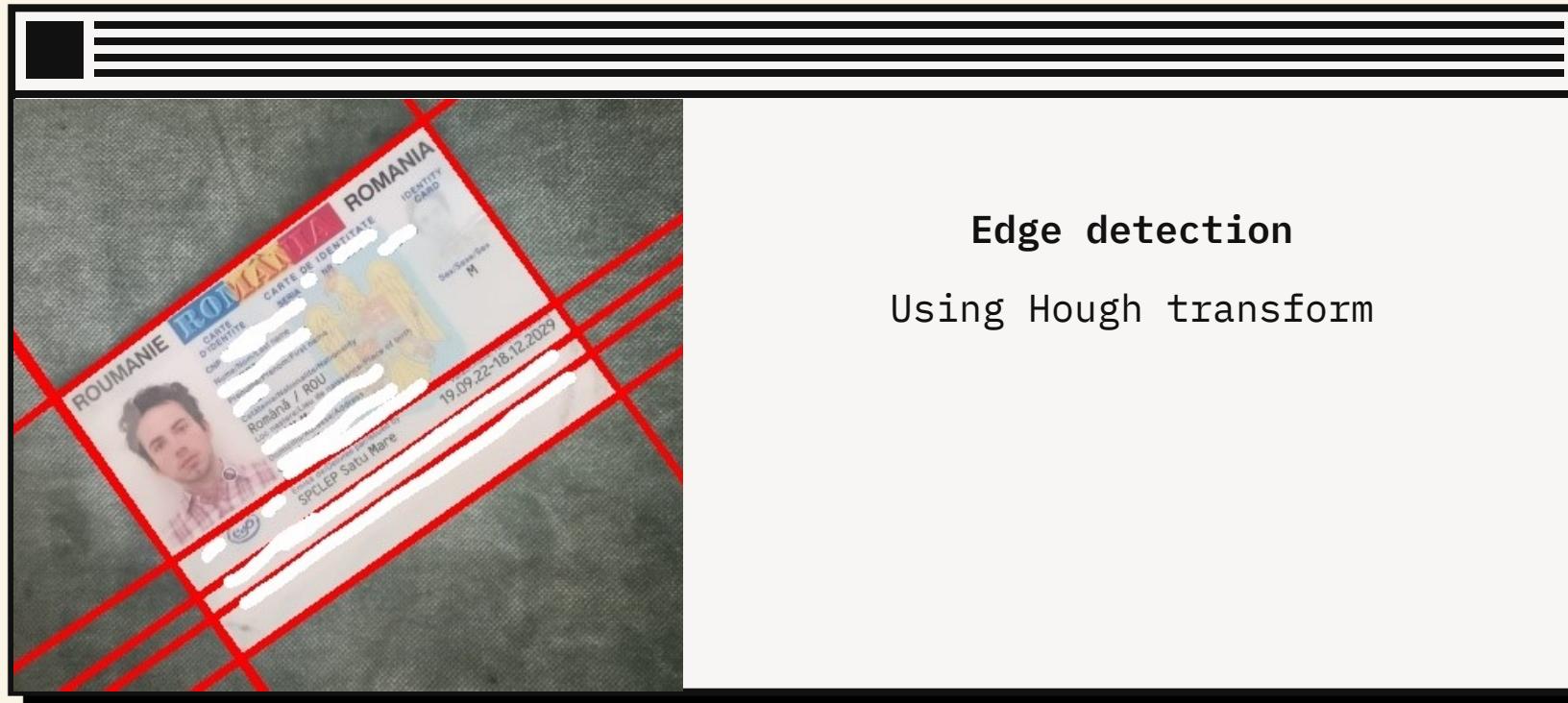


## Recognition App for ID

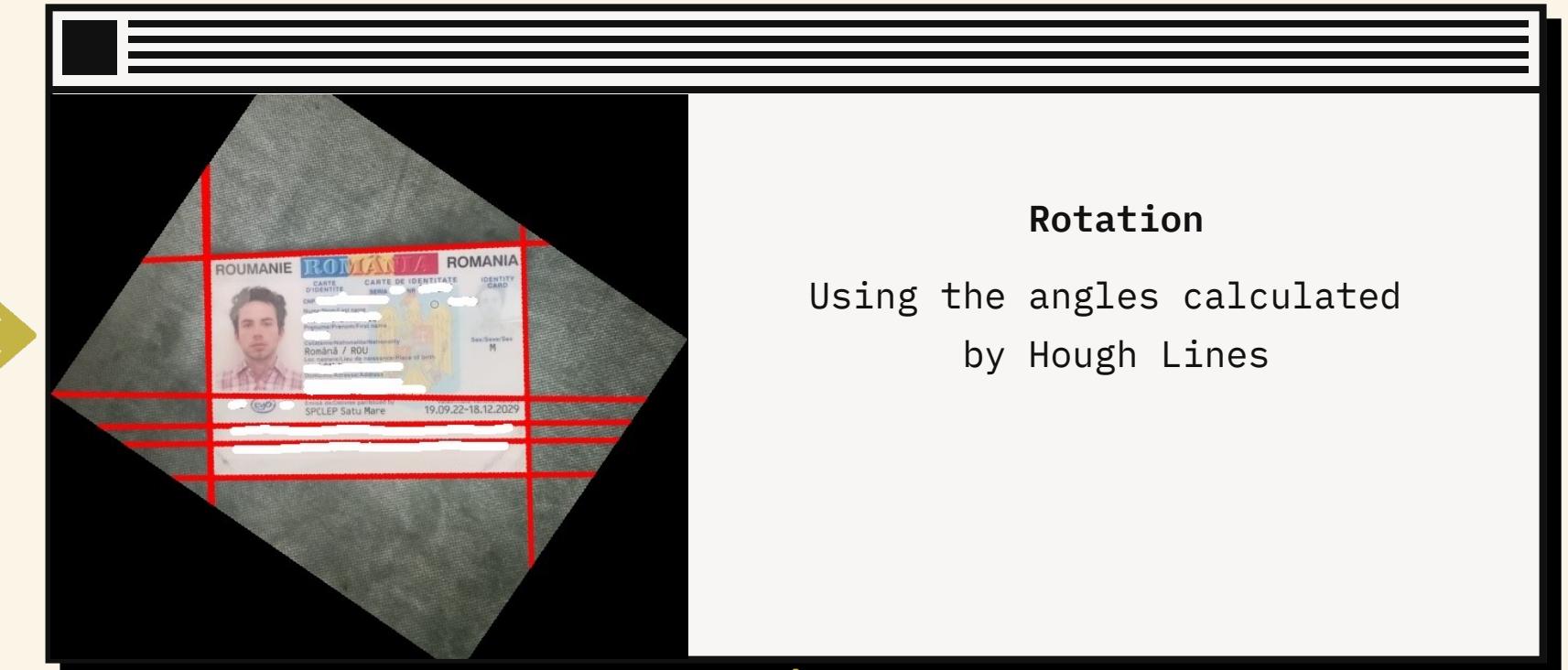


Just place your ID in front of the camera and see what the app tells you!

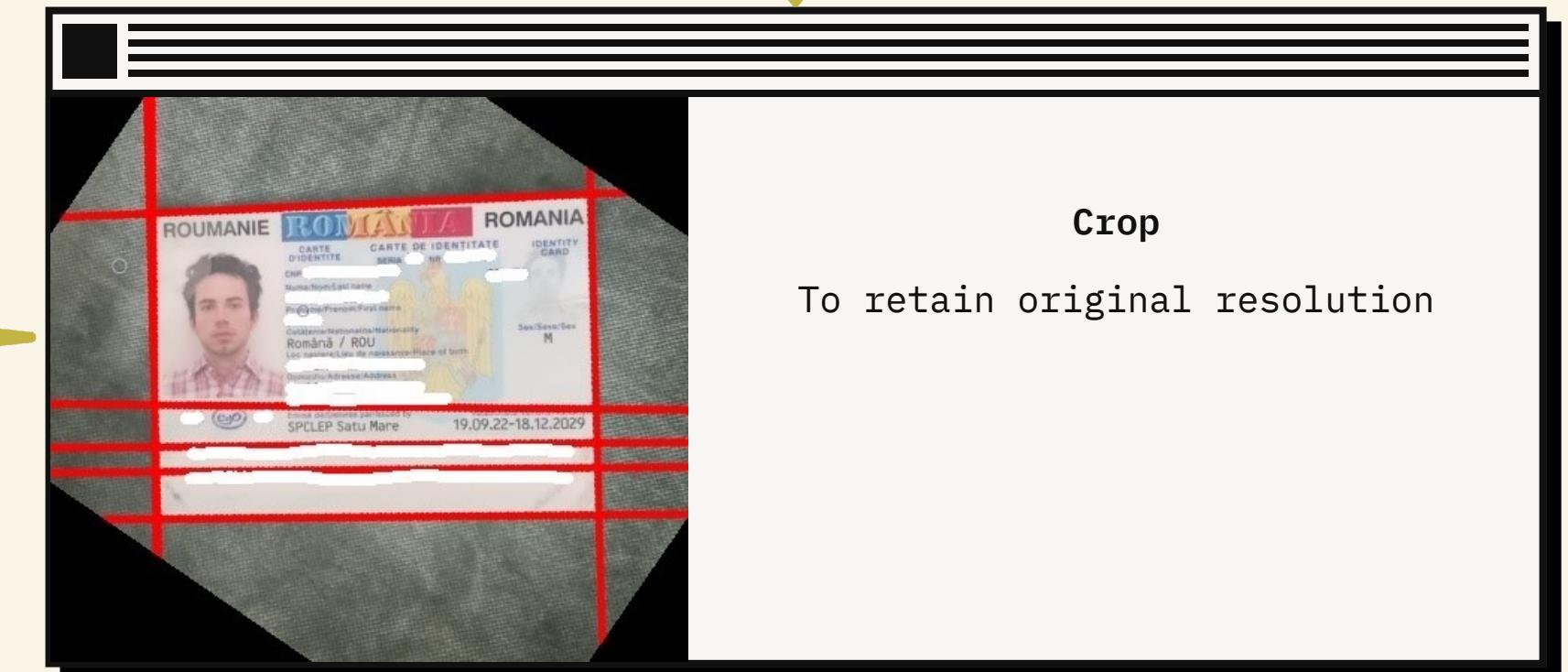
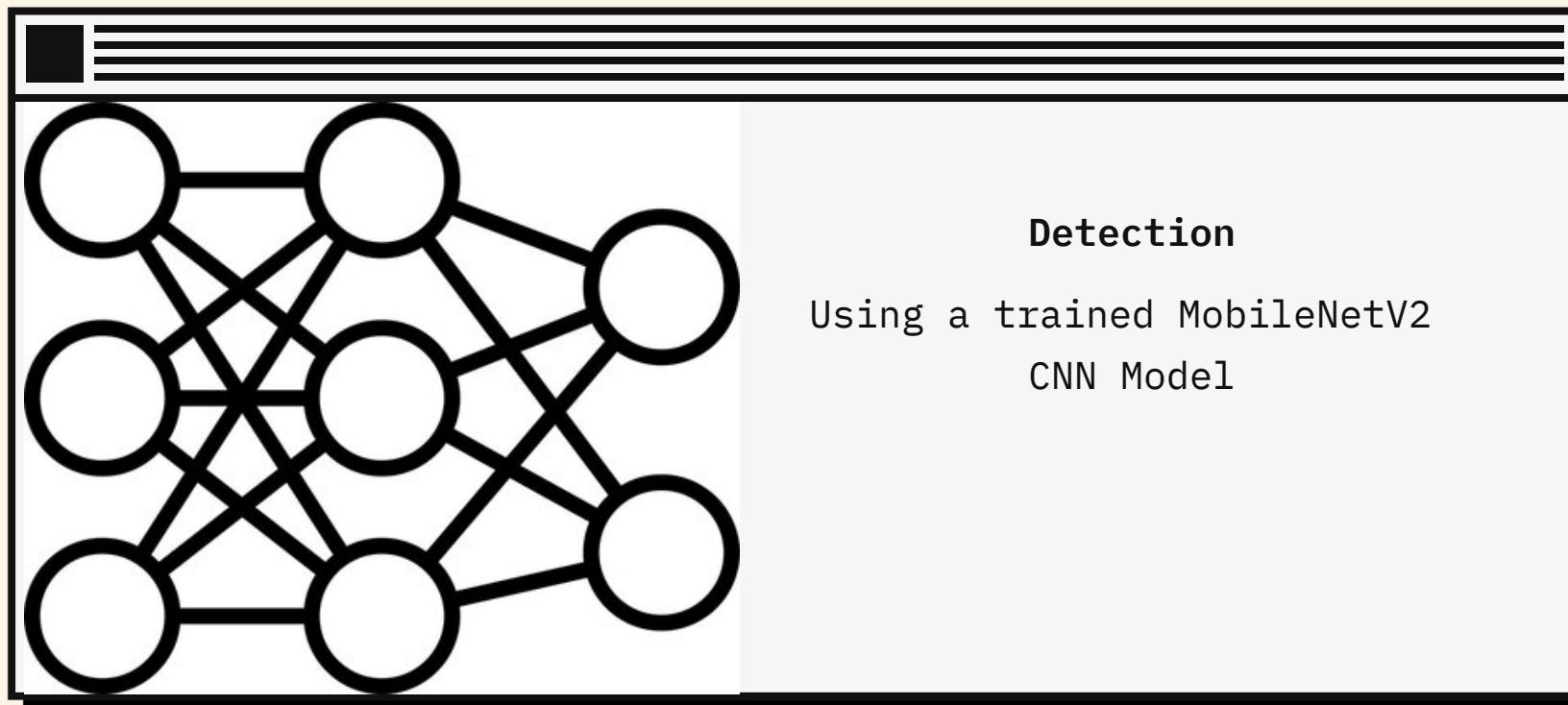
## Under the hood



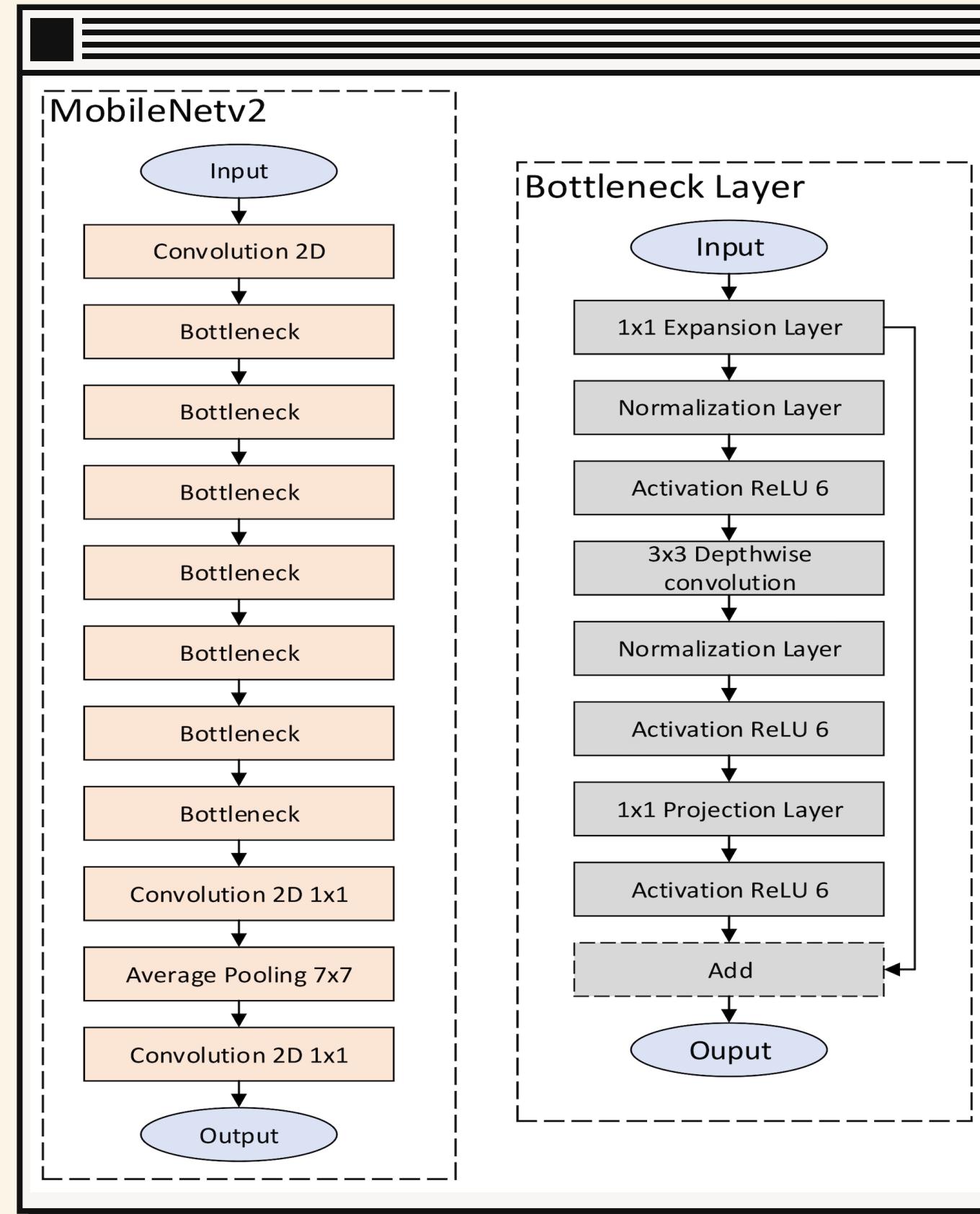
**Edge detection**  
Using Hough transform



**Rotation**  
Using the angles calculated  
by Hough Lines



**Crop**  
To retain original resolution



# MobileNetV2

- Made by Google, takes 224x224x3 input
- According to them, it is a very good feature extractor for object detection and segmentation[1]
- Primarily intended on small device deployment e.g. smartphones
- Accordingly[2], it has 3.47 mil. parameters, does 300 mil MAC, top-1 accuracy is 71.8, top-5 is 91.0
- Accordingly[2], FPS output on tests were between 145 (iPhone 7) and 233 (iPhone X)

[1] <https://blog.research.google/2018/04/mobilenetv2-next-generation-of-on.html>

[2] <https://machinethink.net/blog/mobilenet-v2/>

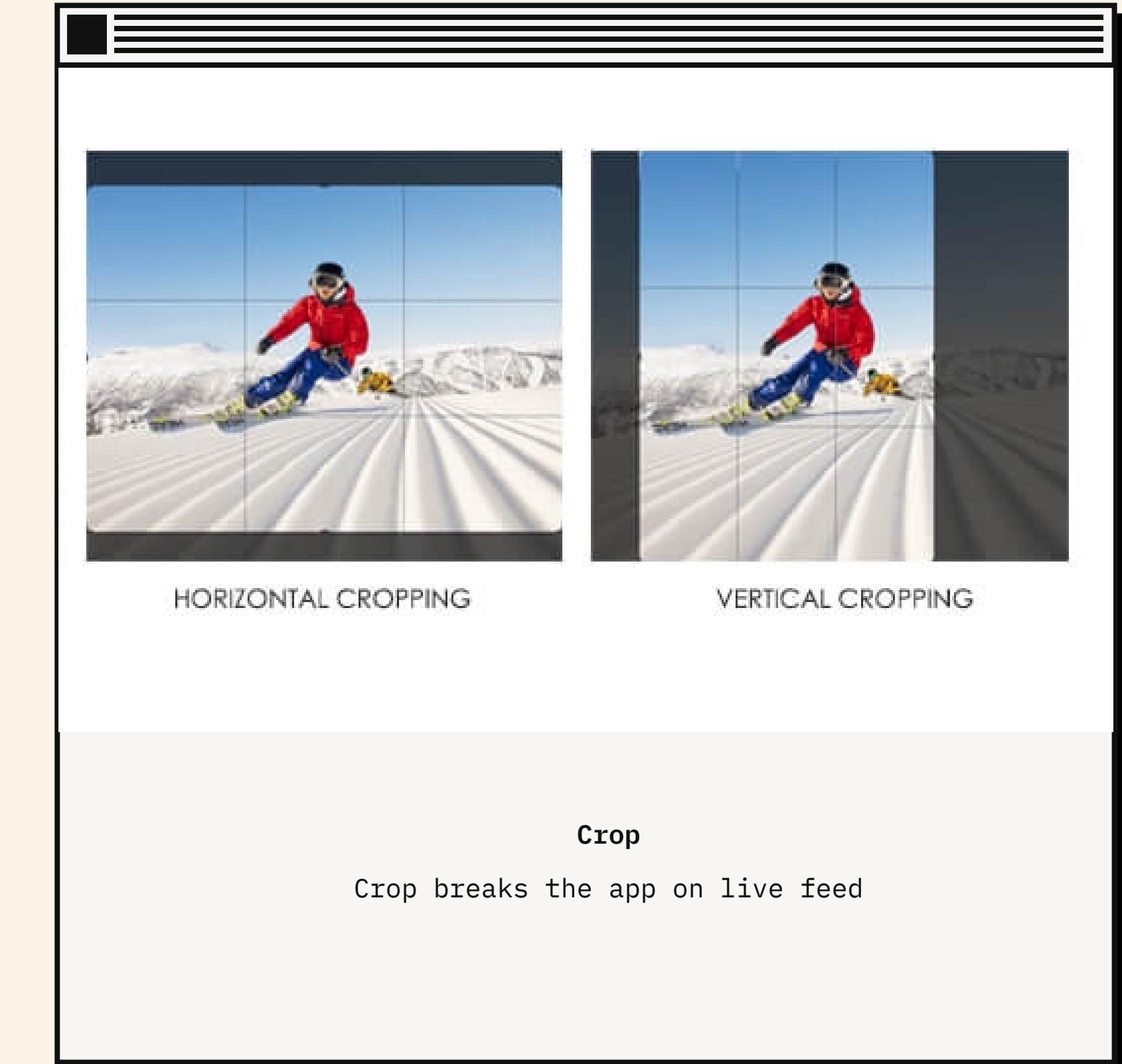


## Future Work



### Fine-tune Dataset

There are cases it still misses

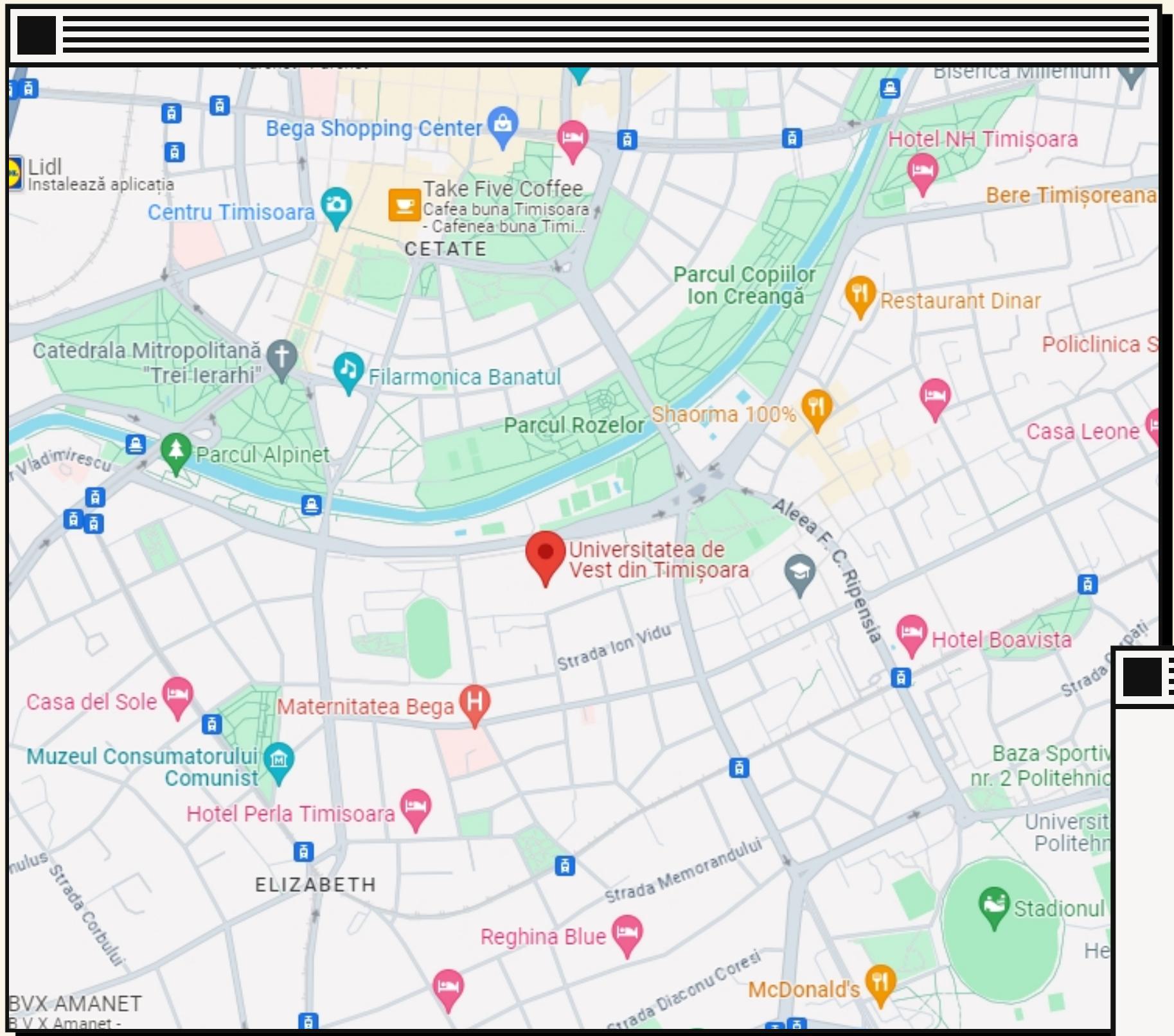


HORIZONTAL CROPPING

VERTICAL CROPPING

### Crop

Crop breaks the app on live feed



# Contact

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# Pitch

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