ROOM DETECTOR

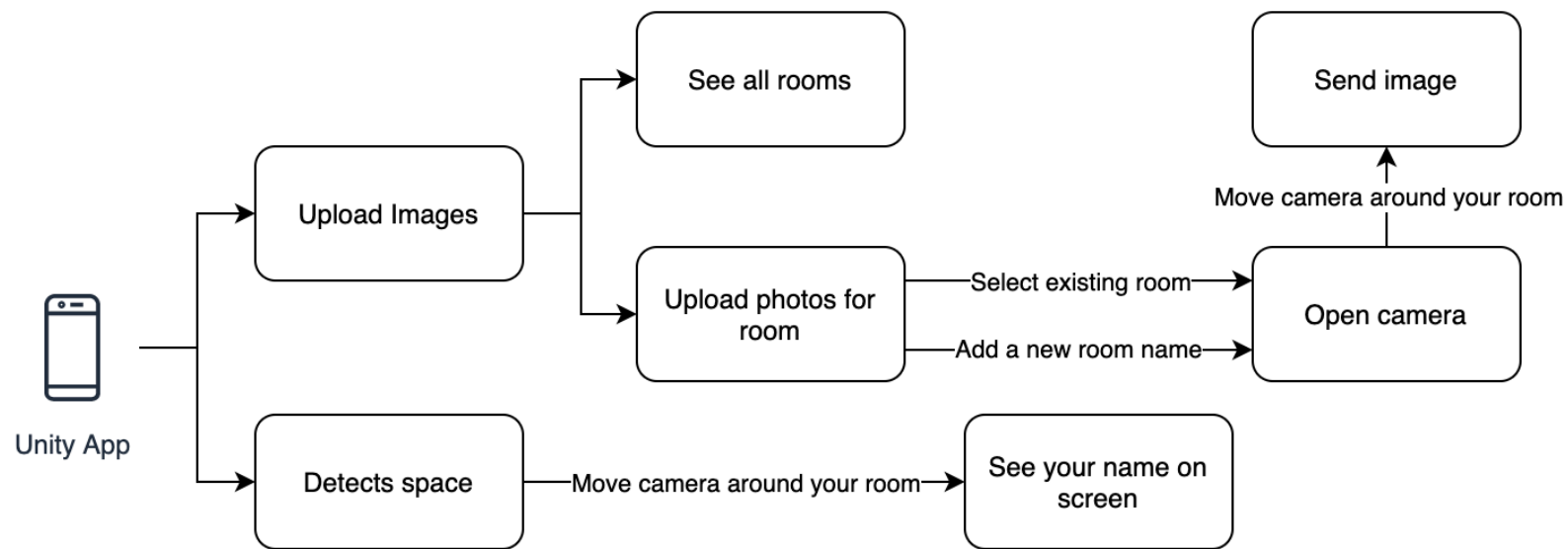Lucrare de licență propusă de
Broască Ioan Iulian
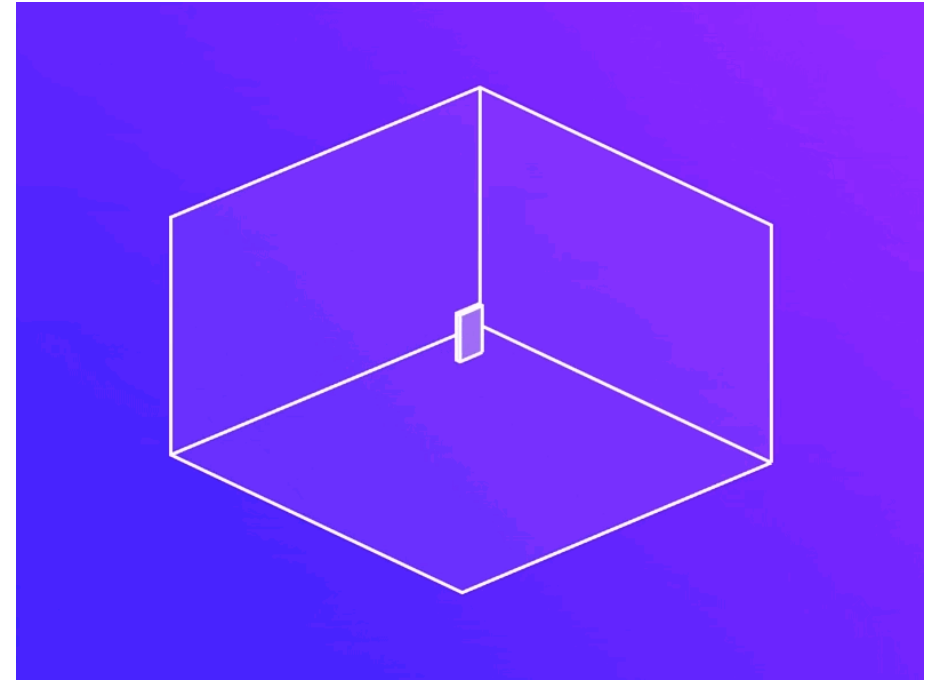
Coordonator științific
Drd. Colab. Florin Olariu
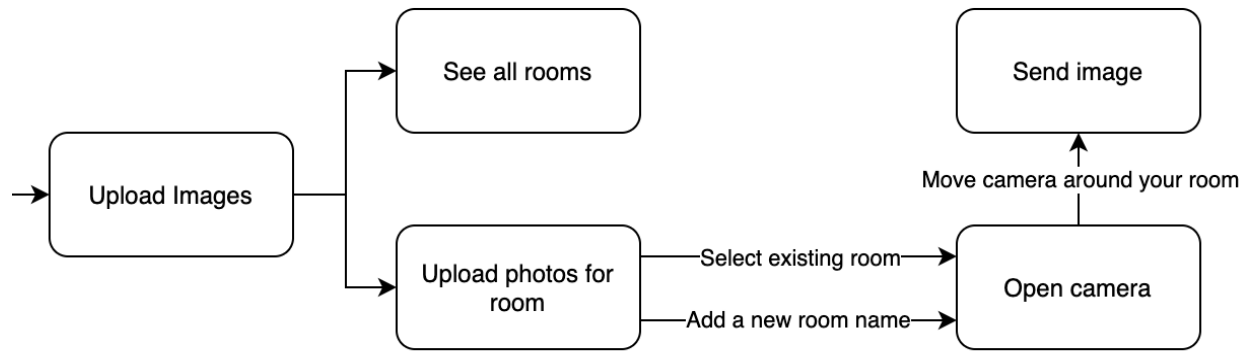
AGENDA

- Descrierea aplicației
- Cercetare
- Platforme
- Tehnologii
- Algoritmi
- Demo
- Concluzii

DESCRIEREA APLICAȚIEI

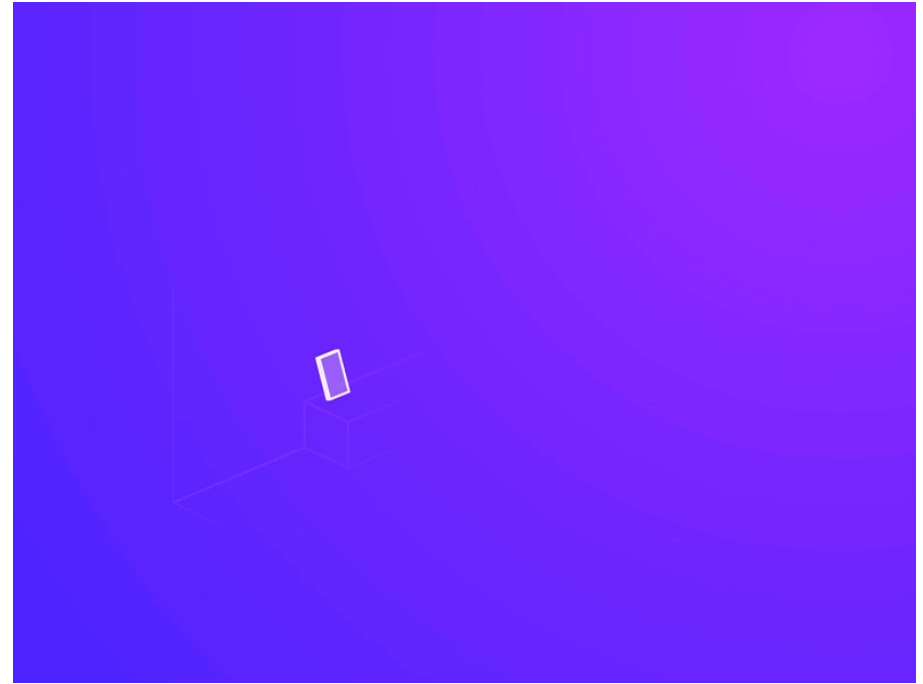# DESCRIEREA APLICAȚIEI

Unity App

Upload Images

See all rooms

Upload photos for room

Select existing room

Add a new room name

Open camera

Move camera around your room

Send image

Detects space

Move camera around your room

See your name on screen

```
         ┌──────────────┐
         │ See all rooms│
         │              │
         └──────────────┘
┌──────────────┐
│ Upload Images│──┐
│              │  │
└──────────────┘  │          ┌──────────────┐                    ┌──────────────┐
                  │          │              │  Select existing   │              │
                  └─────────▶│ Upload photos│────── room ───────▶│ Open camera  │
                             │   for room   │                    │              │
                             │              │──Add a new room──▶ └──────────────┘
                             └──────────────┘       name
```

See all rooms

Upload Images

Send image

Move camera around your room

Upload photos for room

Select existing room

Add a new room name

Open camera

UPLOAD IMAGES

```
       ┌─────────────────┐                                    ┌─────────────────┐
  ──────→│                 │                                    │                 │
       │  Detects space  │──Move camera around your room─────→│  See your name on│
       │                 │                                    │     screen       │
       └─────────────────┘                                    └─────────────────┘
```


DETECTS SPACE

CERCETARE

TENSORFLOW

OPEN-CV

PLATFORME

UNITY ENGINE
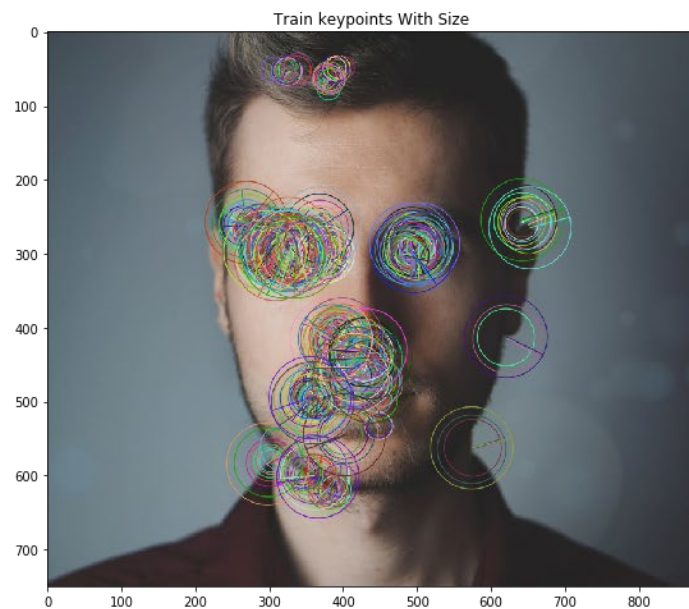
TEHNOLOGII
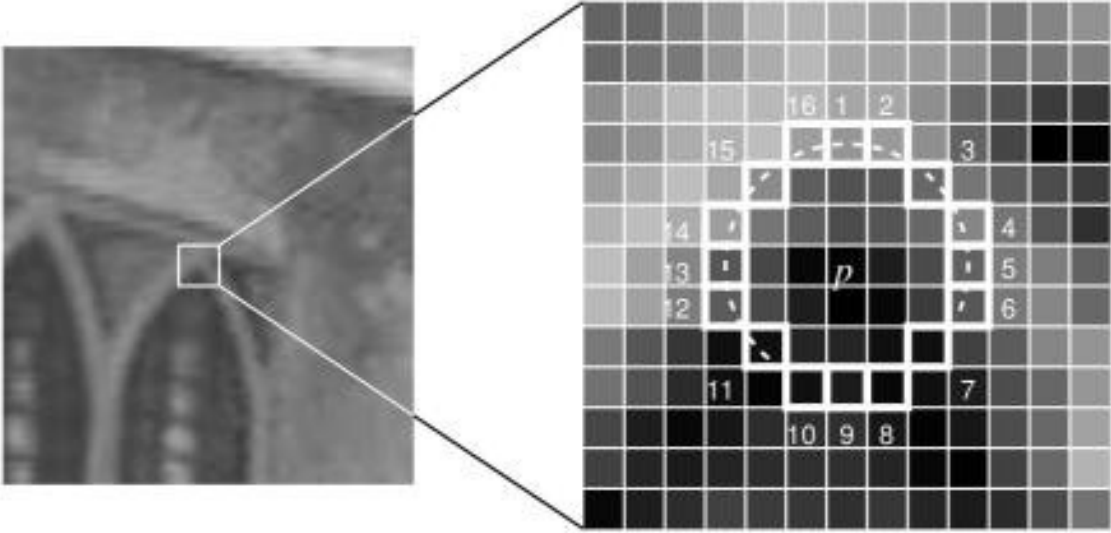
AR FOUNDATION

ARCore

ARKit

FLASK

OPEN-CV

ALGORITMI

ORIENTED FAST AND ROTATED BRIEF (ORB)
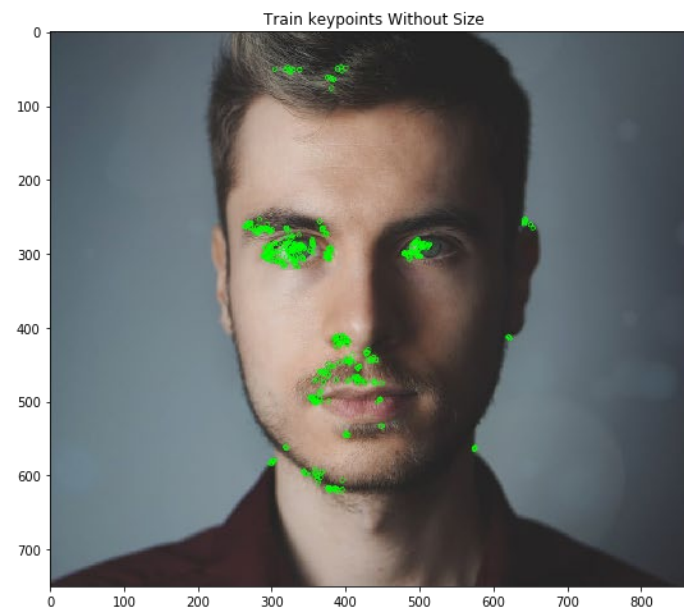
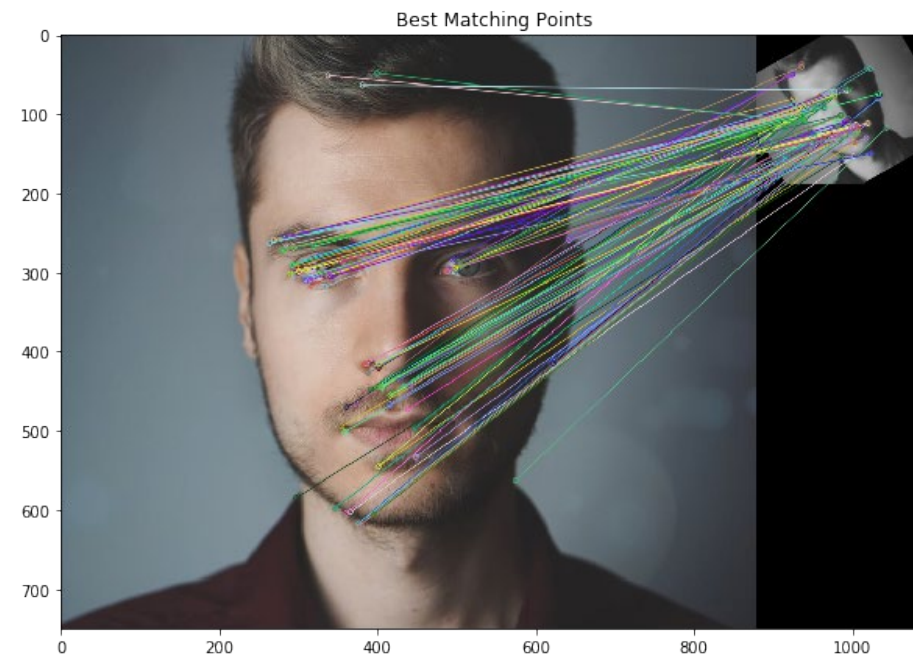# FEATURES FROM ACCELERATED AND SEGMENTS TEST

BINARY ROBUST INDEPENDENT ELEMENTARY (BRIEF)

Patch

σ ■ = First Pixel

$\frac{\sigma}{2}$ ■ = Second Pixel
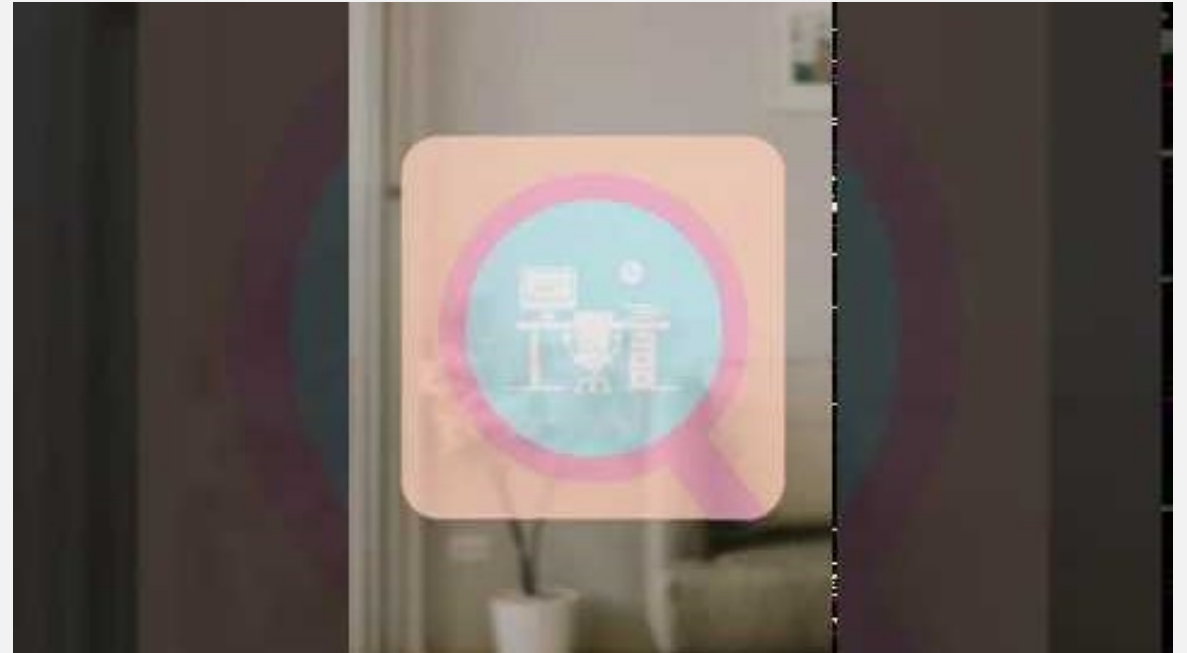
■ = Keypoint

BRUTE FORCE MATCHER (BFMATCHER)

DEMO

DEMO MODUL
„UPLOAD IMAGES"

DEMO MODUL
„DETECTS SPACE"

CONCLUZII