

Automatons

Jamoa:

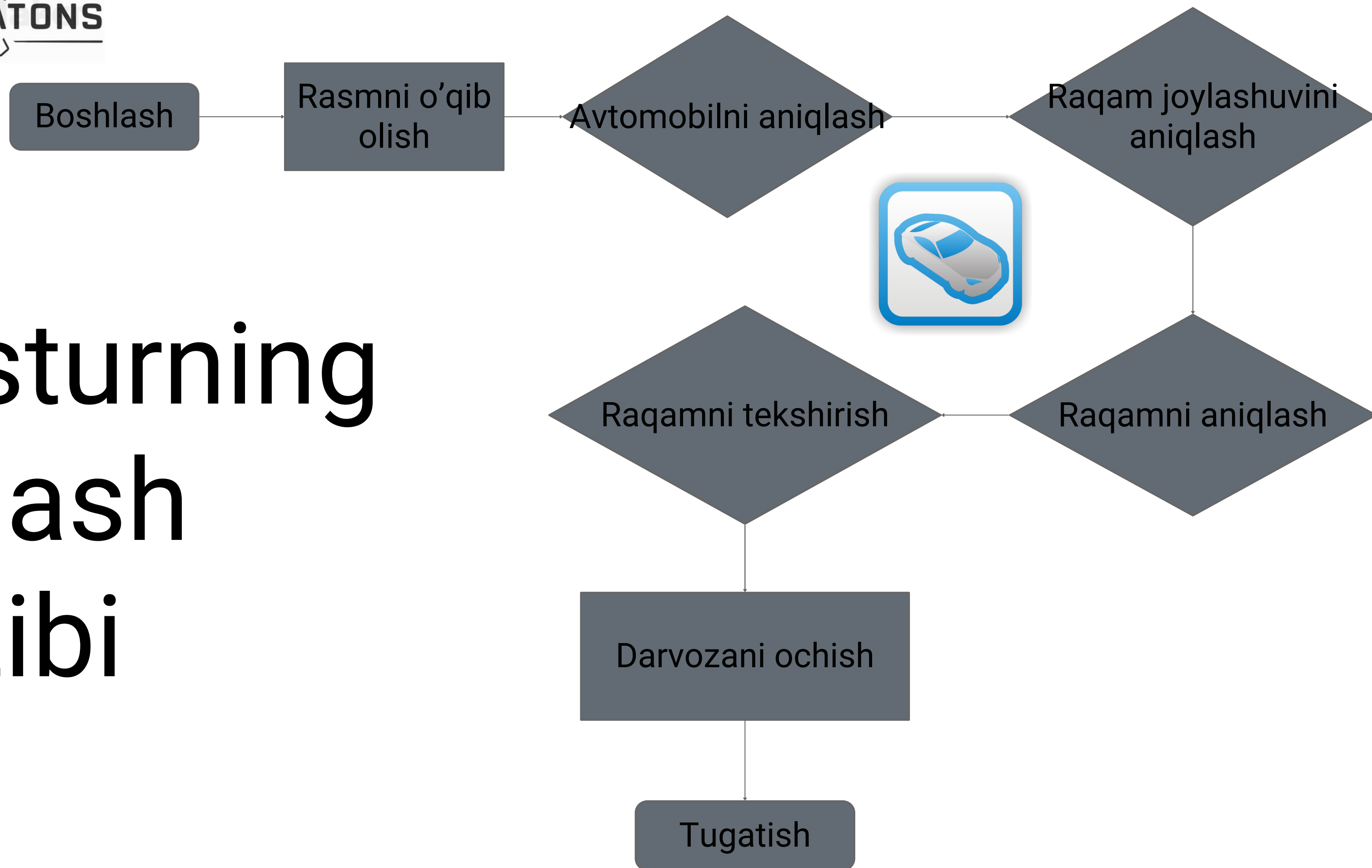
1. Ollanazarov Jamshidbek
2. Qodirboev Otabek
3. Omonov Sardorbek

Kirish–chiqish tizimini avtomatlashtirish

Suniy intellekt yordamida avtomobil
raqamini aniqlash, kirish-chiqish
tizimini avtomatlashtirish va
monitoring qilish



Dasturning ishlash tartibi



Avtomobilni aniqlash

TensorFlow object
detection orqali o'rgatilgan
suniy intellekt yordamida
avtomobilning suratdagi
joylashuvini aniqlash

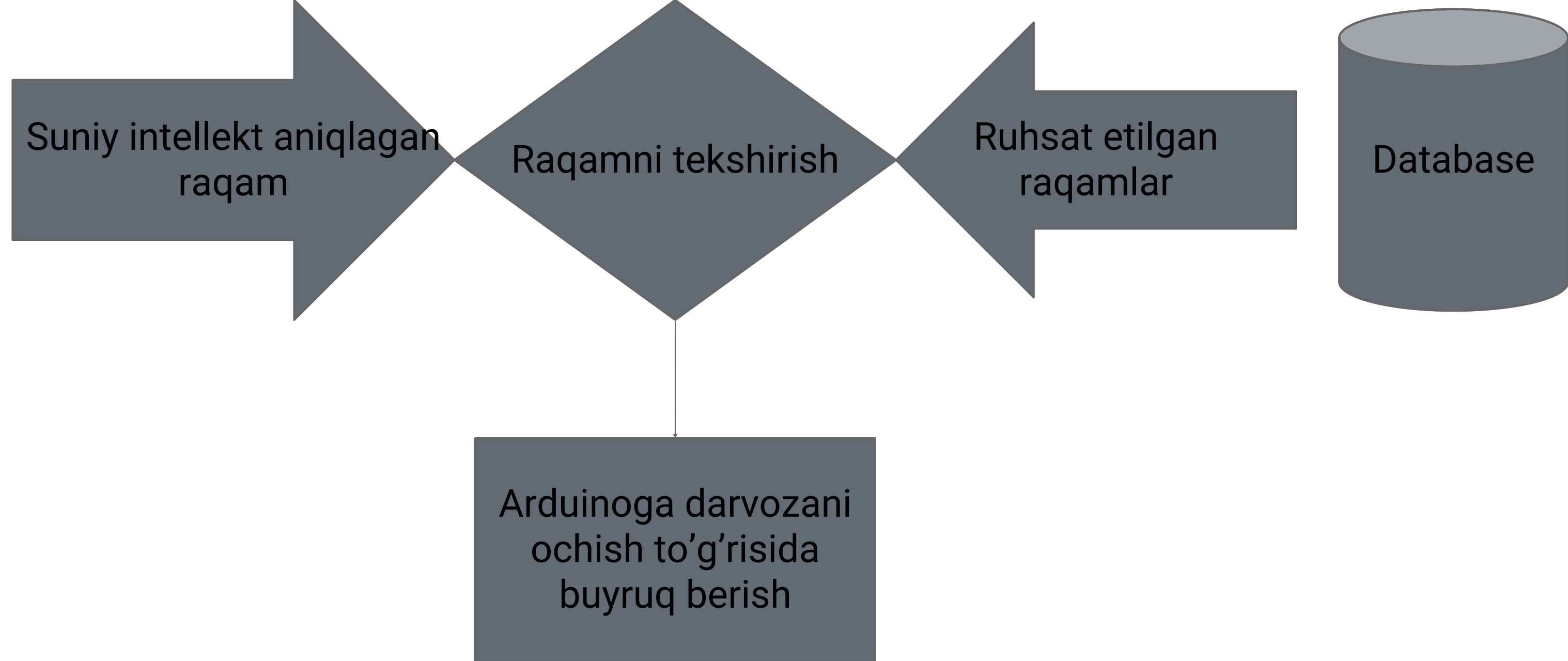


Avtomobil raqamining joylashuvini aniqlash

TFOD orqali o'rgatilgan suniy intellekt yordamida avtomobilning davlat raqamining joylashuvini aniqlash

Avtomobil raqamini aniqlash

Jami 26 harf 10 ta son o'rgatilgan
suniy intellekt orqali avtomobilning
davlat raqami aniqlanadi



```

(h, w, d) = frame.shape

xmin, ymin = int(bbox[1]*w), int(bbox[0]*h)
xmax, ymax = int(bbox[3]*w), int(bbox[2]*h)

cv2.rectangle(frame, (xmin, ymin), (xmax, ymax), (0,0,255), 2)

```

Dastur to'liq pythonida yoziladi

```

bbox = [ymin, xmin, ymax, xmax]
image_np = frame[bbox[0]:bbox[2], bbox[1]:bbox[3]]
image_np = cv2.cvtColor(image_np, cv2.COLOR_BGR2RGB)
input_tensor = tf.convert_to_tensor(image_np)[tf.newaxis, ...]

detect_np = detect_fn_np(input_tensor)

```

Web sahifa pythonning django
frameworkida suniy intellektlar esa
TensorFlow, numpy va opencv
kutubhonalari yordamida yoziladi

```

max_detections = 1
bboxes_np = detect_np['detection_boxes'][0, :max_detections].numpy()[0]
score_np = detect_np['detection_scores'][0, :max_detections].numpy()[0]

(h, w, d) = car_image.shape

xmin, ymin = int(bboxes_np[1]*w), int(bboxes_np[0]*h)
xmax, ymax = int(bboxes_np[3]*w), int(bboxes_np[2]*h)

```



Idora va korxonalar uchun umumiy chiqim 50 mln so'm

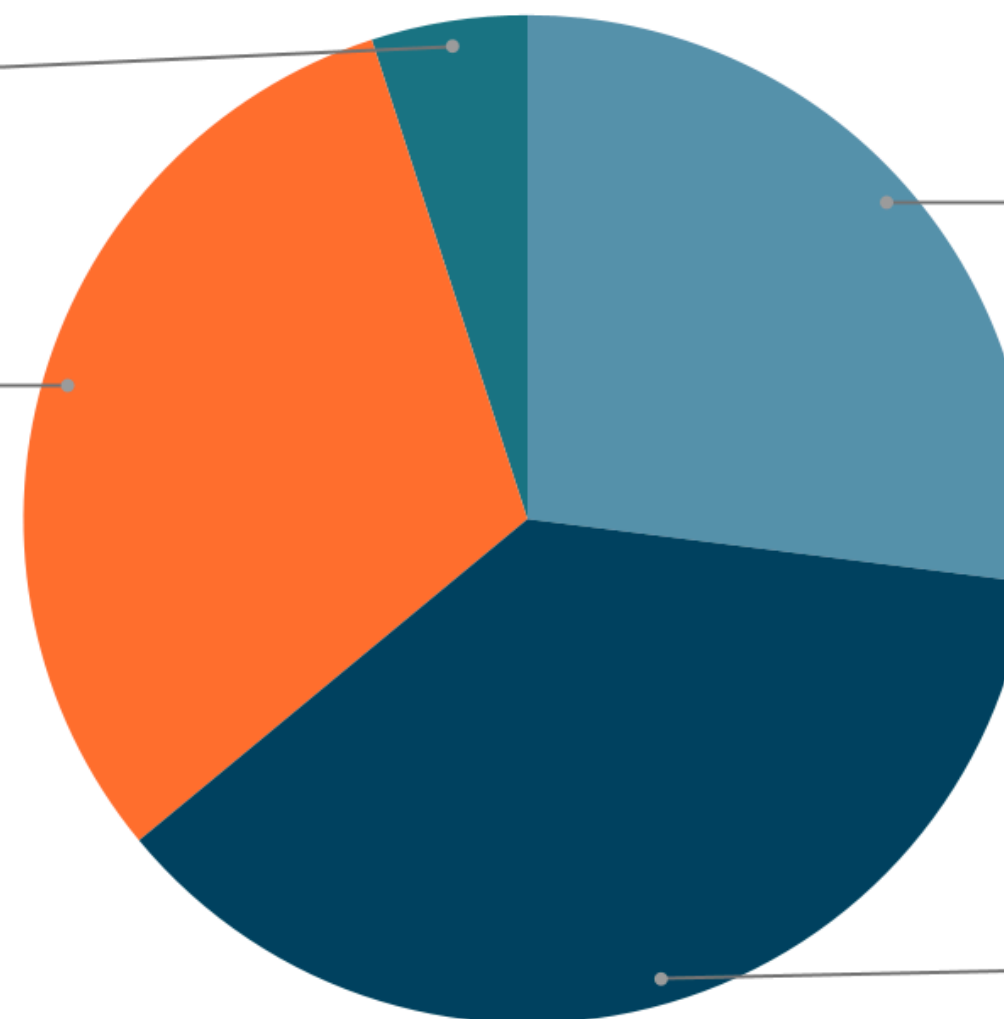
Points scored

Server 2.5 mln so'm
5.0%

Dasturiy ta'minot 15
31.0%

Darvoza 13 mln so'm
27.0%

Avtomashtirish 18
37.0%

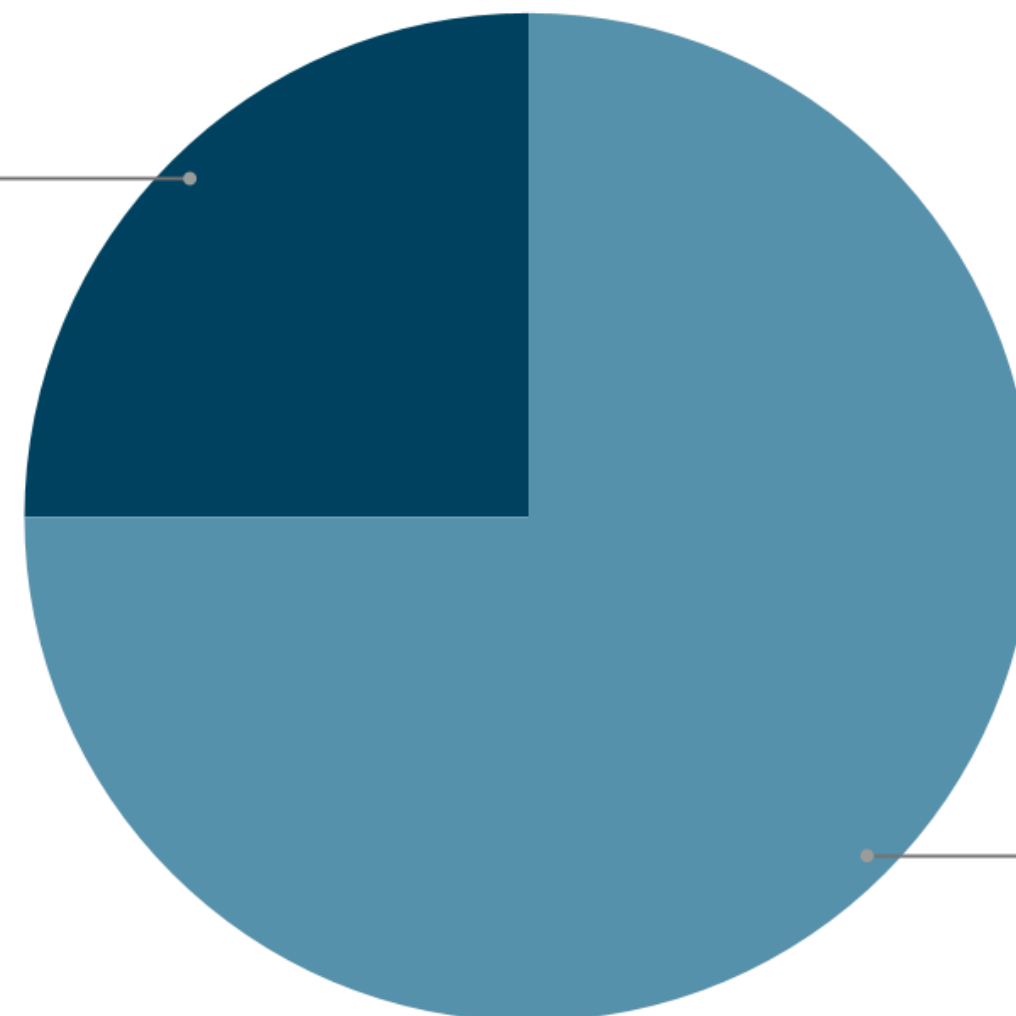




TATU Urganch filiali uchun

Points scored

Kamera va boshqa
25.0%



Darvozani
75.0%

Tizim to'liq tayyor bo'lishi uchun 30 mln so'm kerak

Jami xarajat

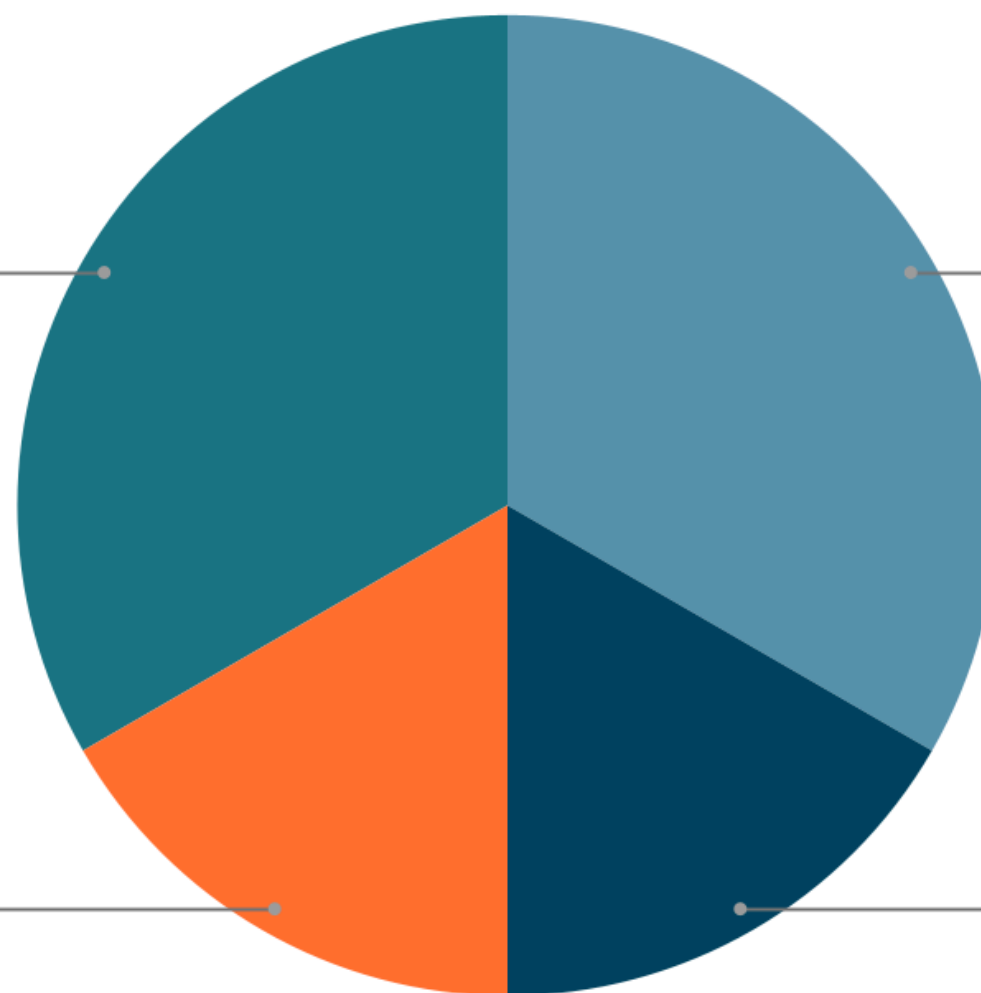
Points scored

Suniy intellektni
33.3%

Darvozani
33.3%

Web sahifani
16.7%

Kamera va boshqa
16.7%



Etiboringiz uchun rahmat

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