Demonstration

Selected Patient's information transformed into a JSON string


```
[{"VYEAR":2009,"VMONTH":1,"VDAYR":7,"AGE":86,"AR
RTIME":1209,"WAITTIME":15,"LOV":174,"RESIDNCE":1
,"SEX":2,"ETHUN":2,"RACEUN":1,"ARREMS":2,"TEMPF"
:975,"PULSE":60,"RESPR":20,"BPSYS":149,"BPDIAS":
75,"POPCT":99,"ONO2":2,"GCS":-9,"IMMEDR":3,"PAIN
":0,"SEEN72":2,"RFV1":12250,"RFV2":10300,"RFV3":
-9,"EPISODE":1,"INJURY":0,"CHF":0,"DIABETES":0,"
LEFTBMSE":0,"LEFTAMSE":0,"LEFTAMA":0,"DOA":0,"DI
EDED":0,"TRANPSYC":0,"TRANOTH":0,"ADMITHOS":0,"O
BSHOS":0,"OBSDIS":0,"OTHDISP":0,"ADMIT":-7,"HDST
AT":-7,"BDATEFL":0,"IMMEDRFL":0,"REGION":4,"MSA"
:1}]
```


Which is then sent to the API server using an http post command.

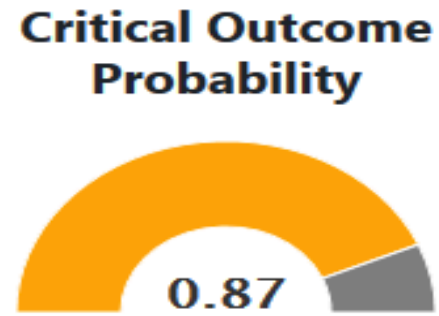
```
import requests
response = requests.post('http://198.23.91.117:5000/predict_esi, data=data)
```

The API returns the result of the post as a JSON string

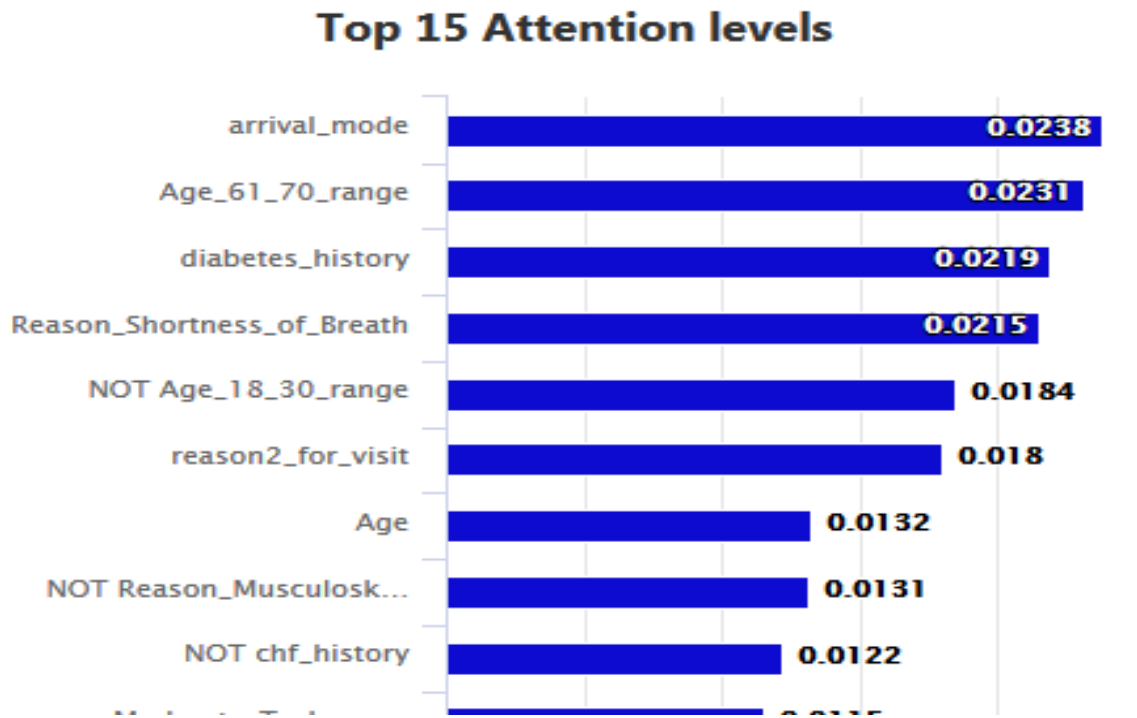

```
{"co": 0.040353480726480484, "rss": 0, "esi": 5,
"co_fi": [{"input_value": "1", "featureName":
"Reason_Headache", "attention_weight":
0.0236165206879377 37}, {"input_value": "12100: ",
"featureName": "reason1_for_visit", "attention_weight":
0.0196951609104871 75}, {"input_value": "1",
"featureName": "Age_31_40_range", "attention_weight":
0.0194955375045537 95}, {"input_value": "0",
"featureName": "Age_18_30_range", "attention_weight":
0.0192815270274877 55}, {"input_value": null,
"featureName": "reason2_for_visit", "attention_weight":
0.0174933038651943 2}, {"input_value": "0",
"featureName": "Reason_Musculoskeletal_Other",
"attention_weight": 0.0137675404548645 02},
{"input_value": "2: NOT by ambulance", "featureName":
"arrival_model", "attention_weight":
0.0134008871391415 6}, {"input_value": "0",
"featureName": "Reason_Shortness_of_Breath", …
```

Which is then parsed by the client to display to the end user

ESI 2

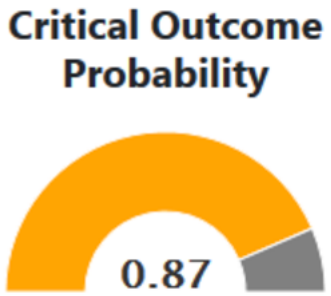


Patient Info	Value
Age	69
Gender	Male
Arrived by Ambulance?	No
Temperature	97.8
Heart Rate	96
Respiratory Rate	20
Systolic Blood Pressure	146
Pulse Oxymetry	98
Reason for Visit Codes	14150, 10352
Metropolitan Statistical Area	Yes



Output

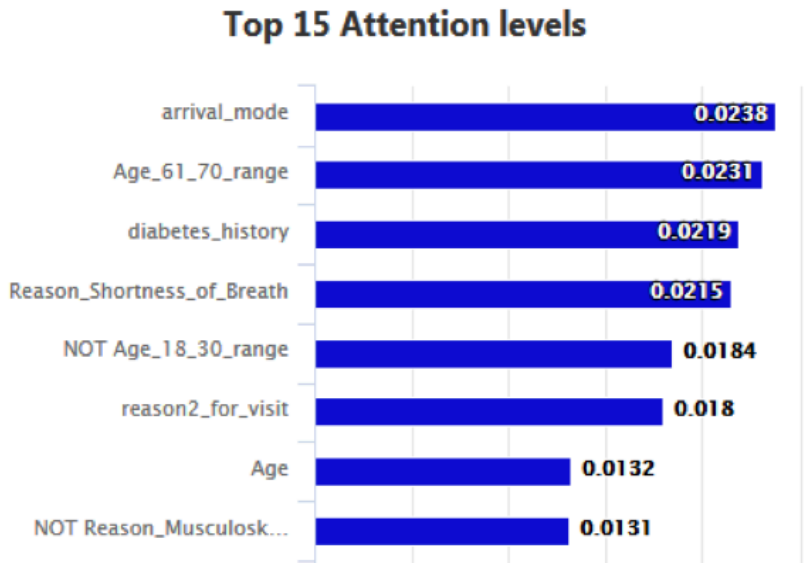
Generating the ESI rating is relatively simple but our goal is to inform the service provider and help them trust our predictions.



The first explanatory piece of information we provide is the probability of critical outcome.

This is the output of one of our models helps determine whether a patient should be in the top two ESI categories or whether we need to look at the Resource utilization results to assign an ESI rating of 3-5.

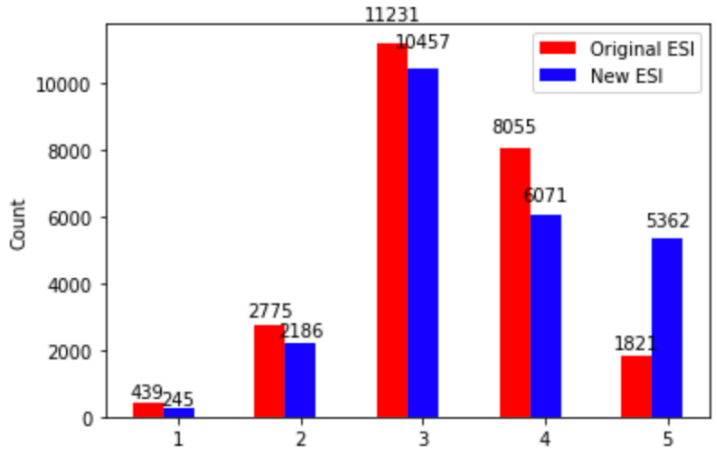
For each of the prediction models, we will also offer a breakdown of the most important predictors in reaching the decision.



Benefits of using IDAN Triage

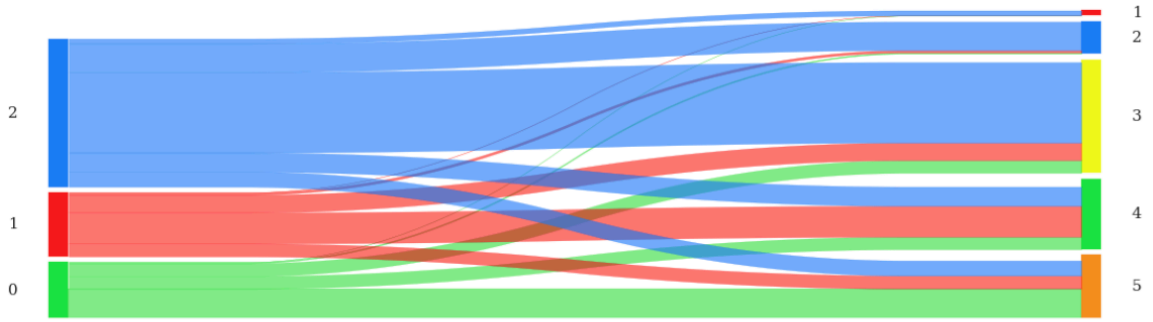
Better distribution of ESI scores

While ESI 3 remains the largest of the lower ESIs, better discrimination among the ESI ratings allows practitioners to better predict what the load will look like with regards to resource utilization, thus allowing them to optimize these to improve patient outcomes.

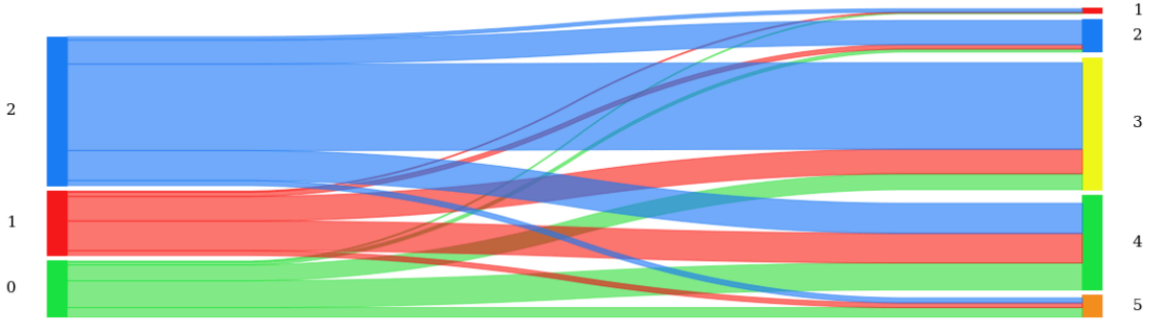


More accurate assignment of ESI ratings when compared with previous ESI (as measured by actual Resource utilization)

Actual Resources to new ESI
{1: 438, 2: 2775, 3: 9700, 4: 6046, 5: 5362}

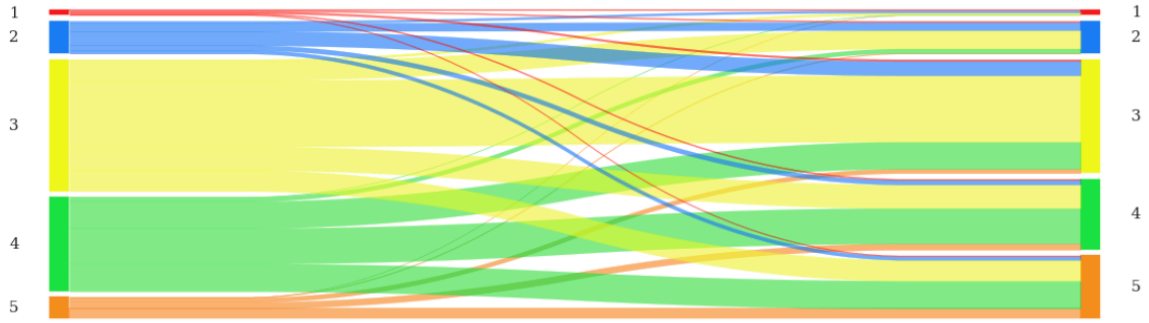


Actual Resources to Previous ESI
{1: 439, 2: 2775, 3: 11231, 4: 8055, 5: 1821}



More meaningful categorization compared to previous ESI

```
Previous ESI to New ESI
{1: 439, 2: 2775, 3: 11231, 4: 8055, 5: 1821}
{1: 438, 2: 2775, 3: 9700, 4: 6046, 5: 5362}
```



Increase of cases leading to critical outcomes like death in the top 2 categories and decrease in the bottom 3