
Article

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[Open Exchange](#)

Predict Maternal Health Risks

Hi community,

Prediction is a critical to the Maternal healthcare. The Health Dataset Application (<https://openexchange.intersystems.com/package/Health-Dataset>) has 10 real health datasets to predict the most important diseases and health problems, including Maternal Risk.

This article detail the steps to predict Maternal Risk using the InterSystems IRIS IntegratedML. This is a technology of InterSystems to do predictions using SQL Commmands! Great!

Follow these steps:

1. Clone/git pull the repo into any local directory

```
$ git clone https://github.com/yurimarx/predict-maternal-risk.git
```

2. Open a Docker terminal in this directory and run:

```
$ docker-compose build
```

3. Run the IRIS container:

```
$ docker-compose up -d
```

4. Go to the Management Portal (user SYSTEM, password SYS). Do a Select to the Maternal Health Risk dataset to confirm the health dataset installation:

```
SELECT  
BS, BodyTemp, DiastolicBP, HeartRate, RiskLevel, SystolicBP, age
```

```
FROM dc_data_health.MaternalHealthRisk
```

5. Inside the Management Portal (System > SQL) Execute the Creation of the view to train the model:

```
CREATE VIEW MaternalRiskTrain AS  
SELECT BS, BodyTemp, DiastolicBP, HeartRate, RiskLevel, SystolicBP, age  
FROM dc_data_health.MaternalHealthRisk WHERE ID < 801
```

6. Inside the Management Portal (System > SQL) Execute the Creation of the view to validate, test and see the results of the prediction:

```
CREATE VIEW MaternalRiskValidate AS  
SELECT BS, BodyTemp, DiastolicBP, HeartRate, RiskLevel, SystolicBP, age  
FROM dc_data_health.MaternalHealthRisk WHERE ID > 801
```

7. Inside the Management Portal (System > SQL) Execute the Creation of the Prediction model - predicting the maternal risk level:

```
CREATE MODEL MaternalRiskModel PREDICTING (RiskLevel) FROM MaternalRiskTrain
```

8. Inside the Management Portal (System > SQL) Execute the train of the model:

```
TRAIN MODEL MaternalRiskModel
```

9. Inside the Management Portal (System > SQL) Execute the validation of the model:

```
VALIDATE MODEL MaternalRiskModel From MaternalRiskValidate
```

10. Inside the Management Portal (System > SQL) See the prediction in action:

```
SELECT PREDICT(MaternalRiskModel) AS PredictedMaternalRisk, RiskLevel AS RealMaternal  
Risk, age, BS, BodyTemp, DiastolicBP, HeartRate, SystolicBP FROM MaternalRiskValidate
```

Enjoy!

[#IntegratedML](#) [#InterSystems IRIS](#)

[Check the related application on InterSystems Open Exchange](#)

Source URL: <https://community.intersystems.com/post/predict-maternal-health-risks>