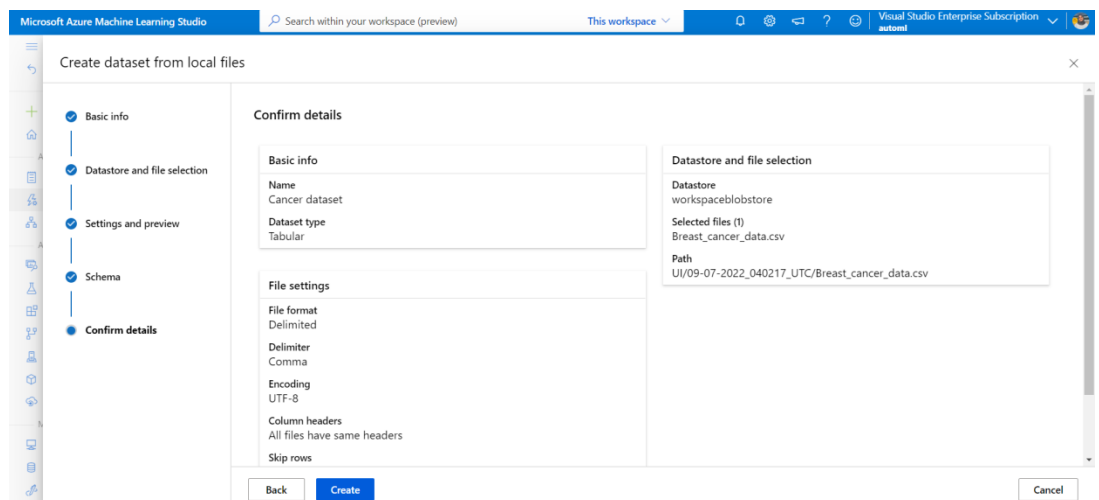


Mini-Project steps briefly

1. Create new automatedML job using Azure Machine Learning Studio :

- Load and configure the Breast cancer dataset
- Choose the type of problem (classification), the target column(diagnosis) and the validation type. I worked with «Monte Carlo»
- Create a compute cluster.
- Use Azure Container Instance ACI not Azure Kubernetes service AKS since it offers an easy way to run containers in the Azure cloud, eliminating the need to manage virtual machines (VMs) or using more complex container orchestration services and It is ideal for simple container-based workloads like smaller-scale apps, build jobs, and task automation.









2. Explore models, explanations, metrics :

- Analyze the features' importance
- Visualize the confusion matrix

Cancer prediction Completed

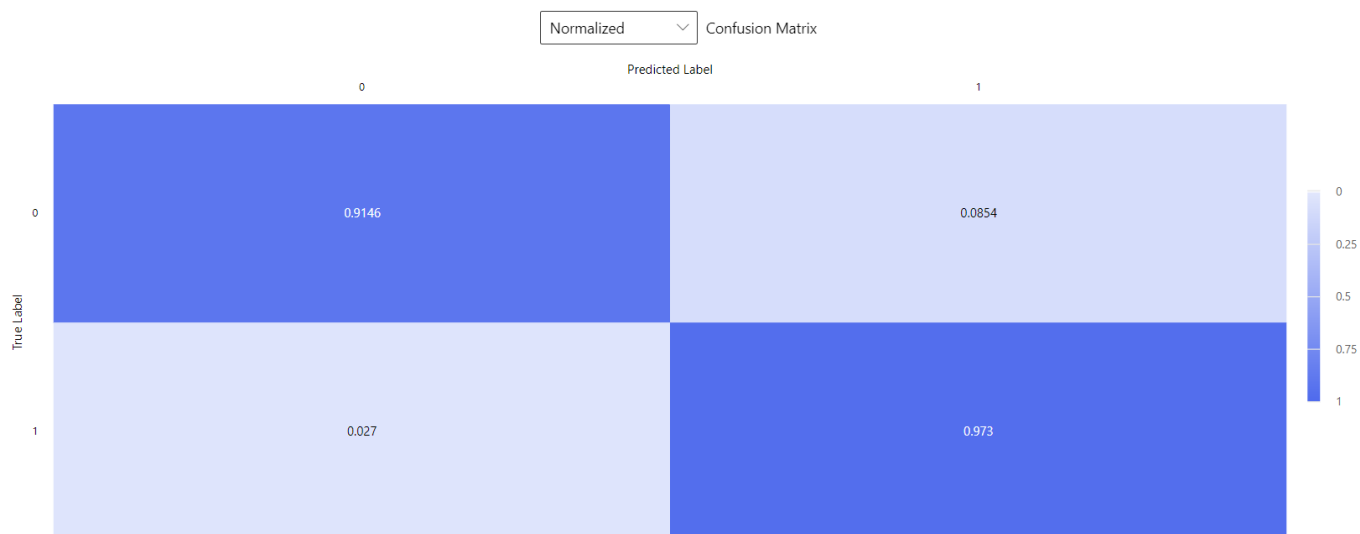
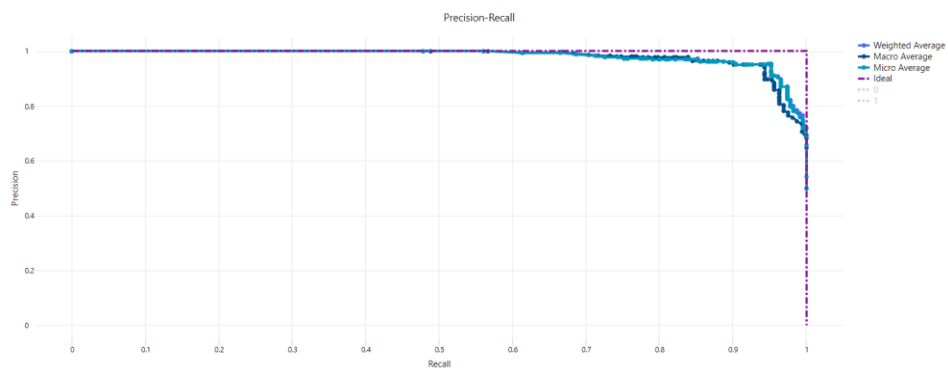
Overview Data guardrails **Models** Outputs + logs Child jobs

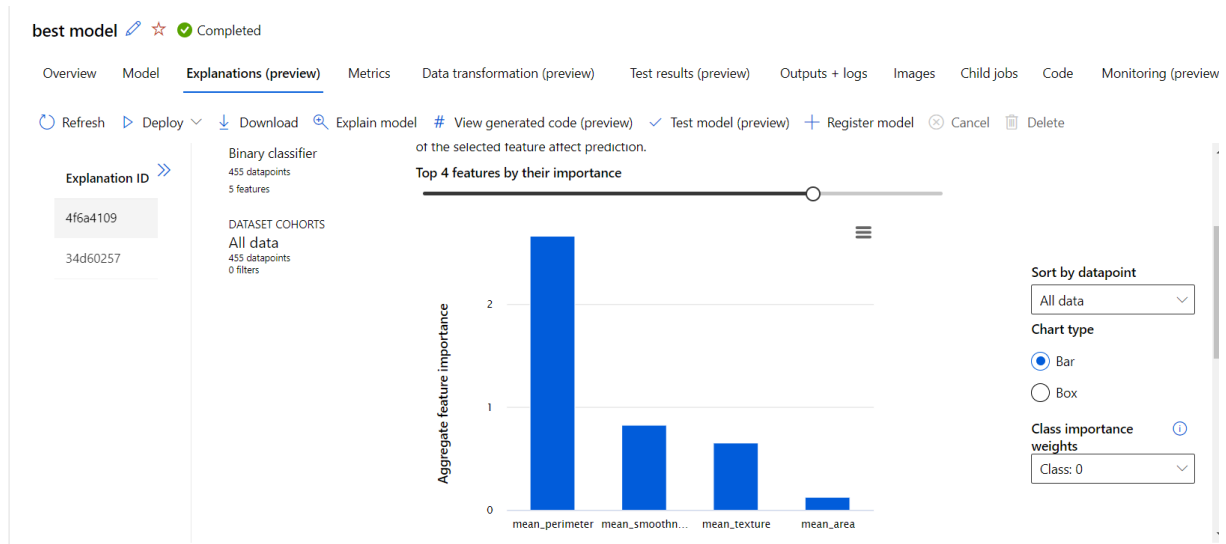
 Refresh  Edit and submit (preview)  Register model  Cancel  Delete |  Deplo

 Search

Showing 1-25 of 64 models

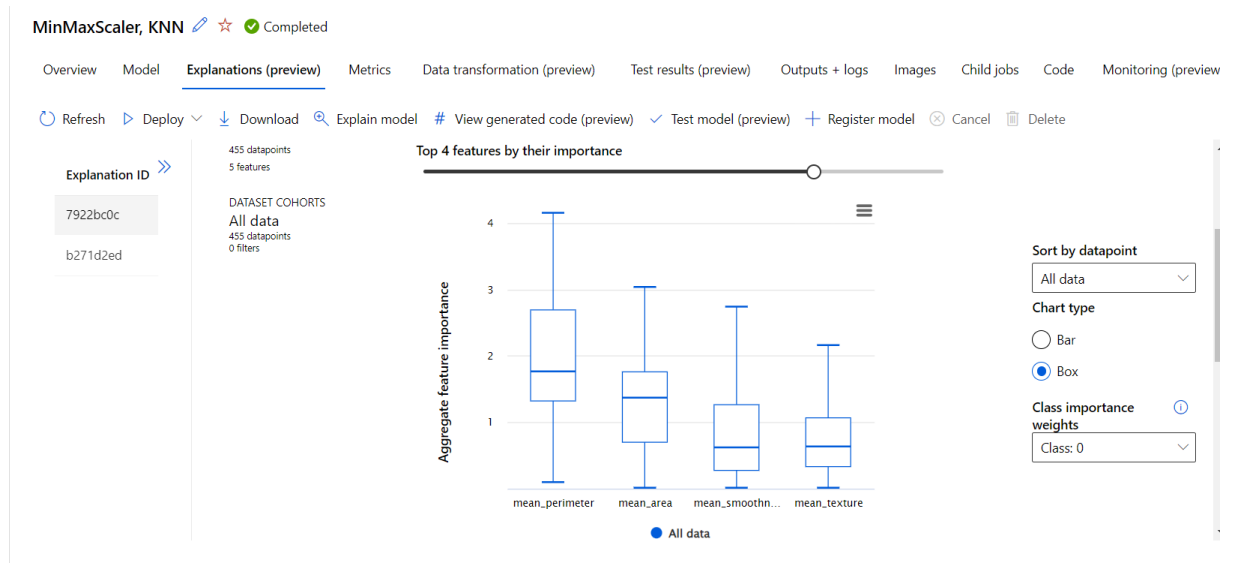
Algorithm name	Explained	Accuracy ↓	
VotingEnsemble	View explanation	0.95217	
StackEnsemble		0.94783	
StandardScalerWrapper, SGD		0.94783	
StandardScalerWrapper, LogisticRegression		0.94783	
MinMaxScaler, LogisticRegression		0.94783	
MaxAbsScaler, LogisticRegression		0.94348	








3. Discover the best model which has the best accuracy.







4. Ask for explanations for models which didn't provide the best results.



5. Test the model

best model    Completed

Overview Model Explanations (preview) Metrics Data transformation (preview) **Test results (preview)**



 Refresh  Deploy  Download  Explain model  View generated code (preview)  Test model (pr




Testing your model gives you the opportunity to see how your model performs before deployment.
Whenever you test your model, your results will be displayed here.








Algorithm name: **VotingEnsemble**



Display name	Accuracy ↓	Dataset used
lime_nutmeg_59c1wt50	0.86842	5ecca468-325f-4e88-b460-f883ccade0de




6. Deploy the model as a web service

 New
 Home






Author
 Notebooks
 Automated ML
 Designer

Assets
 Data
 **Jobs**
 Components
 Pipelines
 Environments
 Models
 Endpoints

Manage
 Compute
 Data

best model    Completed

Overview **Model** Explanations (preview) Metrics Data transformation (preview)


 Refresh  Deploy  Download  Explain model  View generated code (pr

Model summary


Algorithm name
VotingEnsemble

Ensemble details
[View ensemble details](#)

Accuracy
0.95217 [View all other metrics](#)

Sampling
100.00 % 

Registered models
[AutoML0348ffe9766:2](#)
[AutoML0348ffe9766:1](#)

Deploy status
[web-service](#)  Succeeded

7. Consume the model using PowerBI to predict Breast cancer existence

- Download PowerBI desktop
- PowerBI service subscription
- Load the dataset
- Use « Azure machine learning » to rely the PowerBI desktop with your previous deployed model
- Predict the « diagnosis »

- Visualize the actual and predicted diagnosis values
- Save the report and publish it to PowerBI service's dashboard

The screenshot shows the Power Query Editor interface. The main area displays a table with 23 rows of data. The columns are: mean_radius, mean_texture, mean_perimeter, mean_area, mean_smoothness, and diagnosis. The 'diagnosis' column contains values like 'L', 'B', and 'A'. The 'All Insights' button in the top right corner is circled in red.

	mean_radius	mean_texture	mean_perimeter	mean_area	mean_smoothness	diagnosis
1	17.99	10.38	122.8	1001.0	0.1184	
2	20.57	17.77	132.9	1326.0	0.08474	
3	19.69	21.25	130.0	1203.0	0.1096	
4	11.42	20.38	77.58	386.1	0.1425	
5	20.29	14.34	135.1	1297.0	0.1003	
6	12.45	15.7	82.57	477.1	0.1278	
7	18.25	19.98	119.6	1040.0	0.09463	
8	13.71	20.83	90.2	577.9	0.1189	
9	13.0	21.82	87.5	519.8	0.1273	
10	12.46	24.04	83.97	475.9	0.1186	
11	16.02	23.24	102.7	797.8	0.08206	
12	15.78	17.89	103.6	781.0	0.0971	
13	19.17	24.8	132.4	1123.0	0.0974	
14	15.85	23.95	103.7	782.7	0.08401	
15	13.73	22.61	93.6	578.3	0.1131	
16	14.54	27.54	96.73	658.8	0.1139	
17	14.68	20.13	94.74	684.5	0.09867	
18	16.13	20.68	108.1	798.8	0.117	
19	19.81	22.15	130.0	1260.0	0.09831	
20	13.54	14.36	87.46	566.3	0.09779	
21	13.08	15.71	85.63	520.0	0.1075	
22	9.504	12.44	60.34	273.9	0.1024	
23						