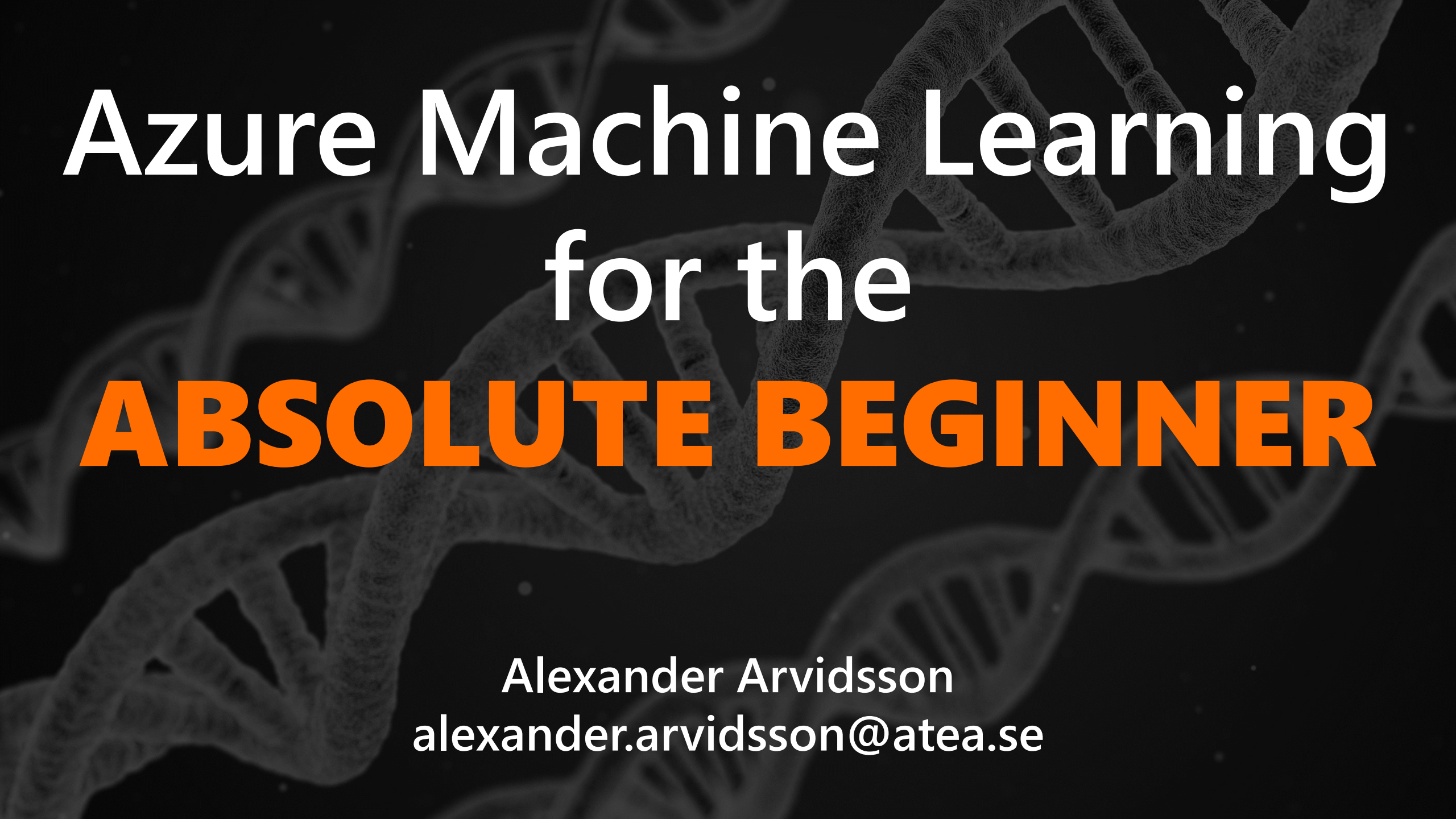

Azure Machine Learning for the ABSOLUTE BEGINNER

Alexander Arvidsson
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LUXTEC

Principal Solutions Architect @ Atea

| Data Platform MVP | Speaker | Blogger |
| Podcaster | Pluralsight author |

ATEA

KNEE-DEEP IN TECH

MVP
Microsoft®
Most Valuable Professional

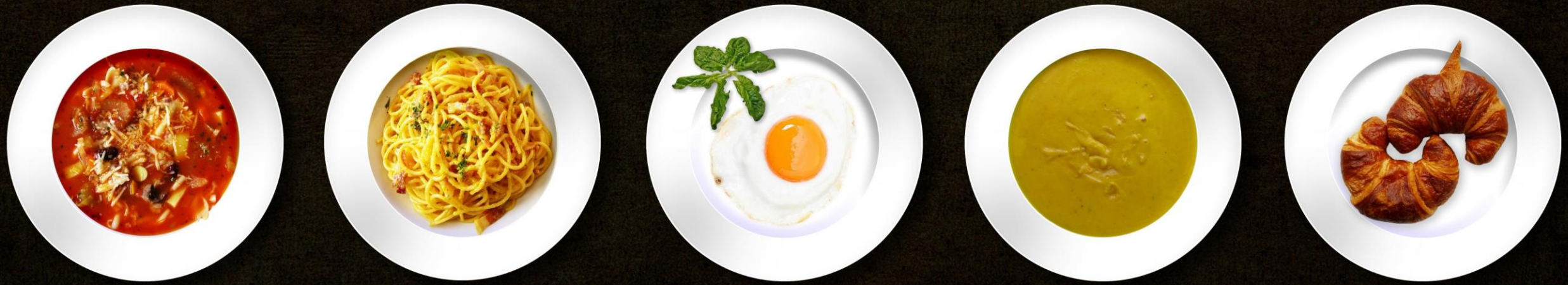
Machine learning (ML) is the scientific study of **ALGORITHMS** and **STATISTICAL MODELS** that computer systems use to **PROGRESSIVELY IMPROVE** performance for a **SPECIFIC TASK**.

Machine learning algorithms build a **MATHEMATICAL MODEL** of sample data, known as **TRAINING DATA**, in order to make predictions or decisions **WITHOUT BEING EXPLICITLY** programmed to perform the task.

AUX
LOW
80 Hz
AUX

0 0,5 1 1,5 2 2,5 3 3,5 4 4,5 5 5,5 6
0 25 50 75 100 25 50 75 200 25 50 75 300 25 50 75

Week
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday
September / Septembre
September / Septiembre
September / Settembre
October / Octobre
Oktober / Octubre
Oktober / Ottobre
November / Novembre
November / Noviembre
November / Novembre



Using **STATISTICAL MODELS**

to find **PATTERNS** in the data

to **PREDICT** outcomes where

NO DATA EXISTS

SUPERVISED learning

Classification (categorization)

Regression (predicted value)

Anomaly detection

SUPERVISED learning

Classification (categorization)

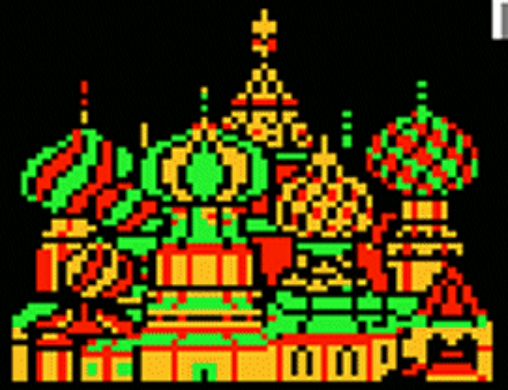
Regression (predicted value)

Anomaly detection

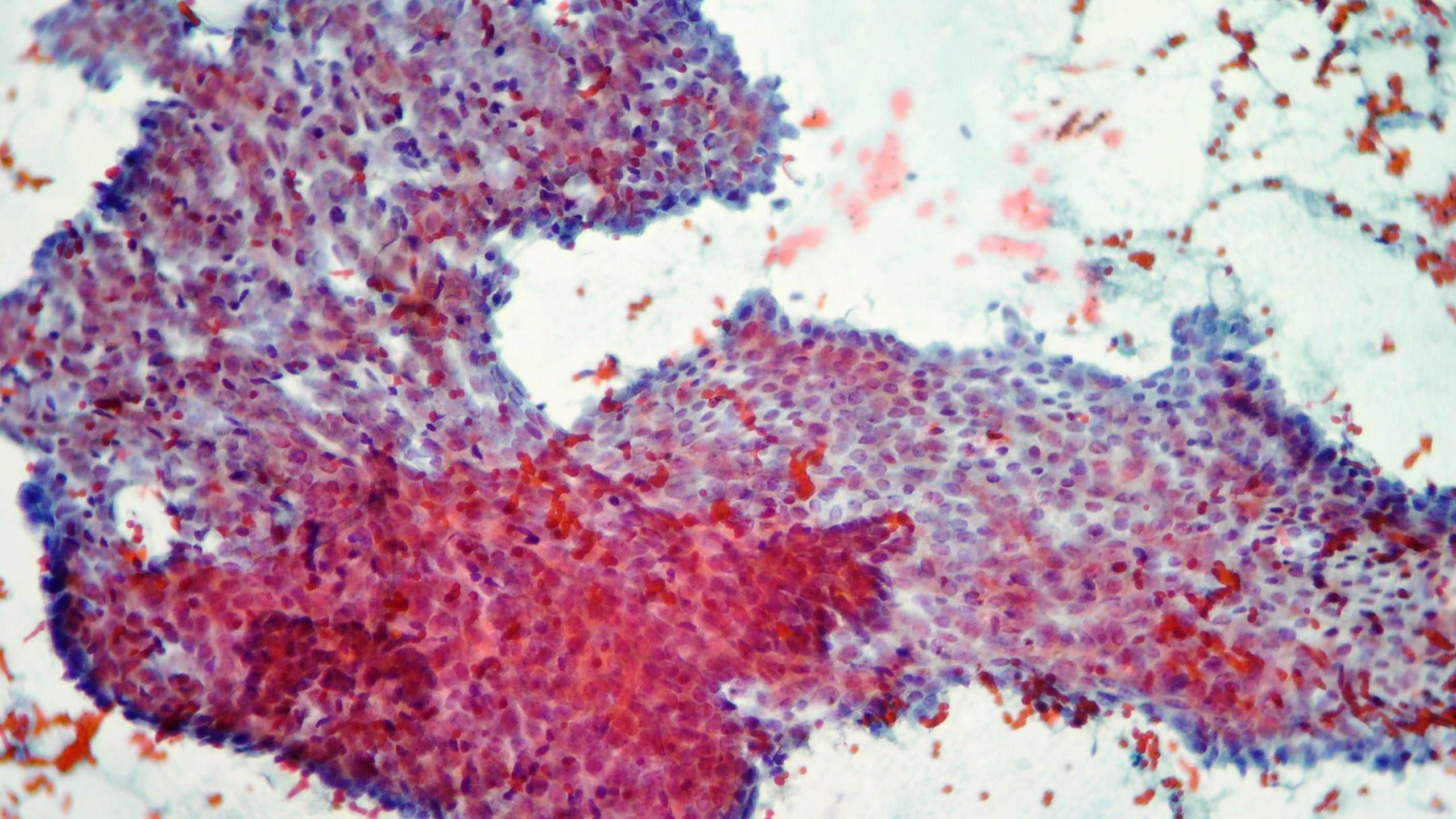
UNSUPERVISED learning

TETRIS™

PUSH START



© 1989 Nintendo



Column1	Column2	Column3	Column4	Column5	Column6	Column7	Column8
842302	M	17.99	10.38	122.8	1001	0.1184	0.2776
842517	M	20.57	17.77	132.9	1326	0.08474	0.07864
84300903	M	19.69	21.25	130	1203	0.1096	0.1599
84348301	M	11.42	20.38	77.58	386.1	0.1425	0.2839
84358402	M	20.29	14.34	135.1	1297	0.1003	0.1328
843786	M	12.45	15.7	82.57	477.1	0.1278	0.17
84862001	M	16.13	20.68	108.1	798.8	0.117	0.2022
849014	M	19.81	22.15	130	1260	0.09831	0.1027
8510426	B	13.54	14.36	87.46	566.3	0.09779	0.08129
8510653	B	13.08	15.71	85.63	520	0.1075	0.127
8510824	B	9.504	12.44	60.34	273.9	0.1024	0.06492
8511133	M	15.34	14.26	102.5	704.4	0.1073	0.2135
851509	M	21.16	23.04	137.2	1404	0.09428	0.1022

Column1	Column2	Column3	Column4	Column5	Column6	Column7	Column8
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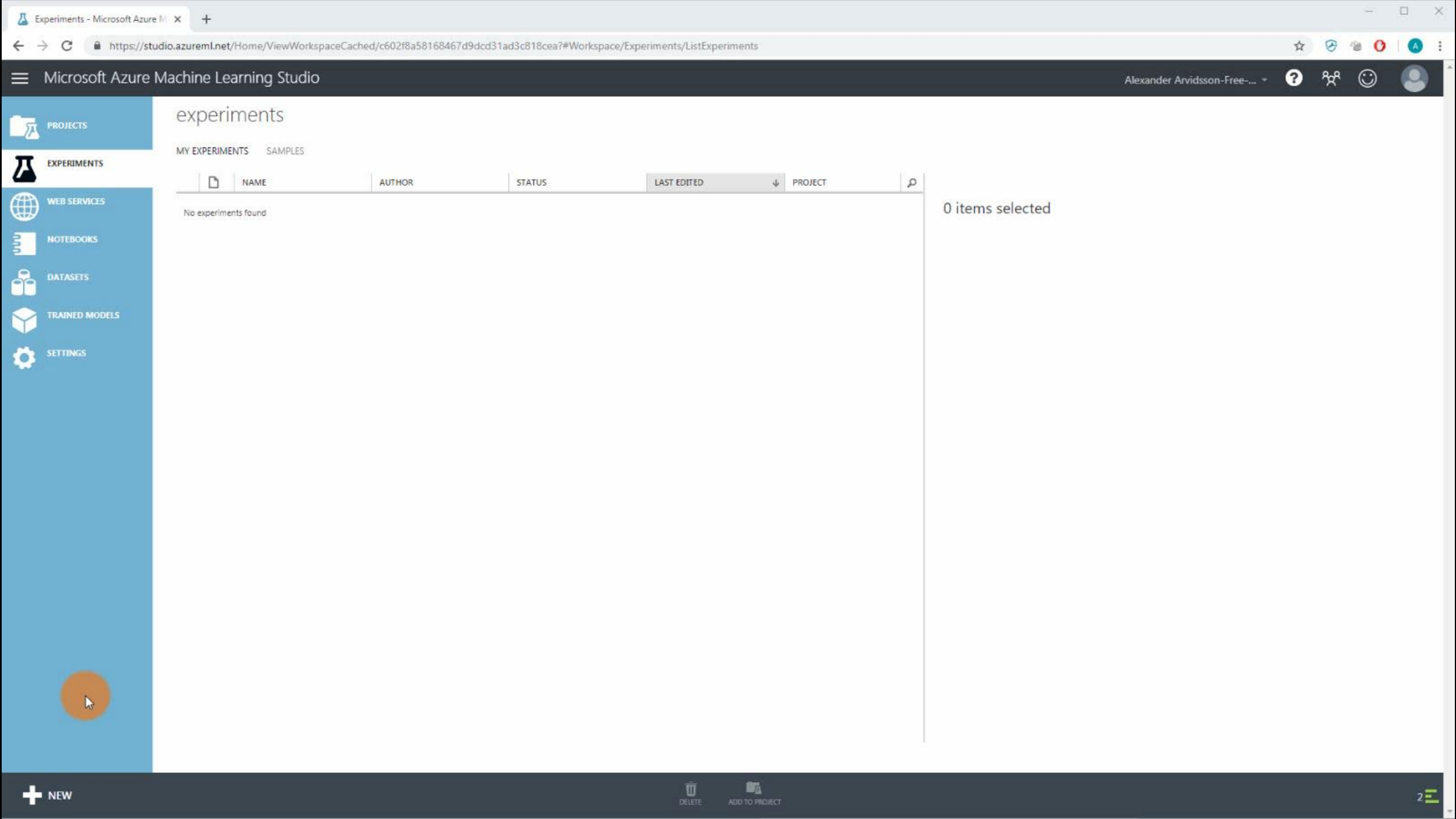
Experiments - Microsoft Azure M
https://studio.azureml.net/Home/ViewWorkspaceCached/c602f8a58168467d9dcd31ad3c818cea?#Workspace/Experiments/ListExperiments
Microsoft Azure Machine Learning Studio
Alexander Arvidsson-Free-...
PROJECTS
EXPERIMENTS
WEB SERVICES
NOTEBOOKS
DATASETS
TRAINED MODELS
SETTINGS
experiments
MY EXPERIMENTS
SAMPLES
NAME
AUTHOR
STATUS
LAST EDITED
PROJECT
No experiments found
0 items selected
NEW
DELETE
ADD TO PROJECT

How can
machine learning
be USED?

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Machine learning is a **TOOL**

Azure is the perfect **TOOLBOX**

We have only scratched the **SURFACE**

Thank you!

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