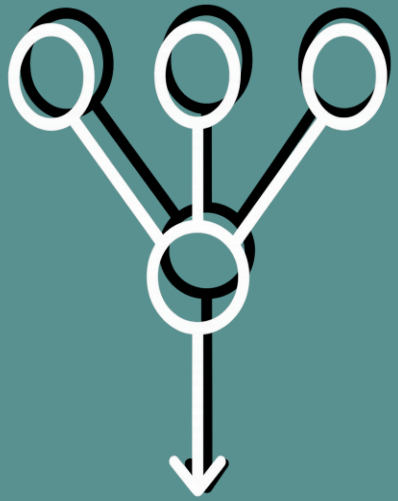
Welcome to the Machine Learning Society



What We did Last Year

- *2 Main Branches:*
  - *Machine Learning Lectures*
  - *Kaggle*
- *Extra Events*
  - *Internal and external Hackathons*
  - *Insight Days*

What is New

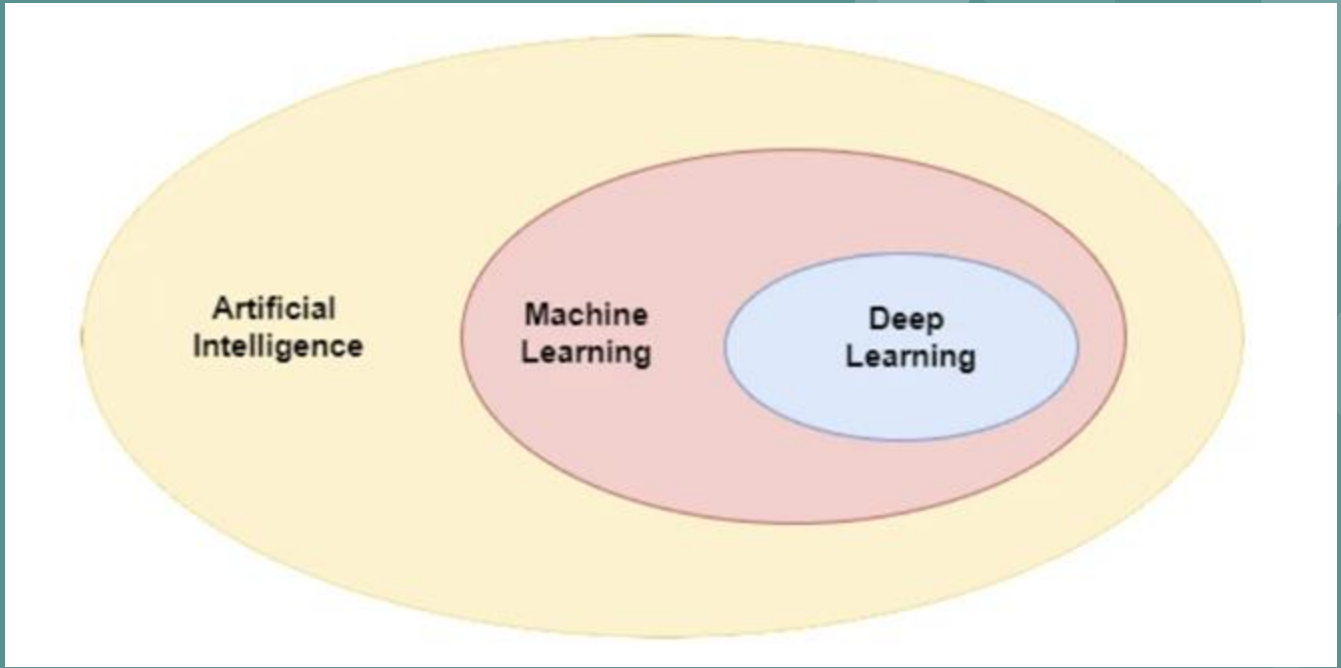
1 New Branch:

- ***Quantitative Trading***

More events:

- ***1 Month Hackathon***
- ***+ Everything from last year***

Artificial Intelligence



What is Machine Learning ?

“ Machine learning is the science of getting computers to act without being explicitly programmed ” - Andrew Ng

What is Artificial Intelligence?

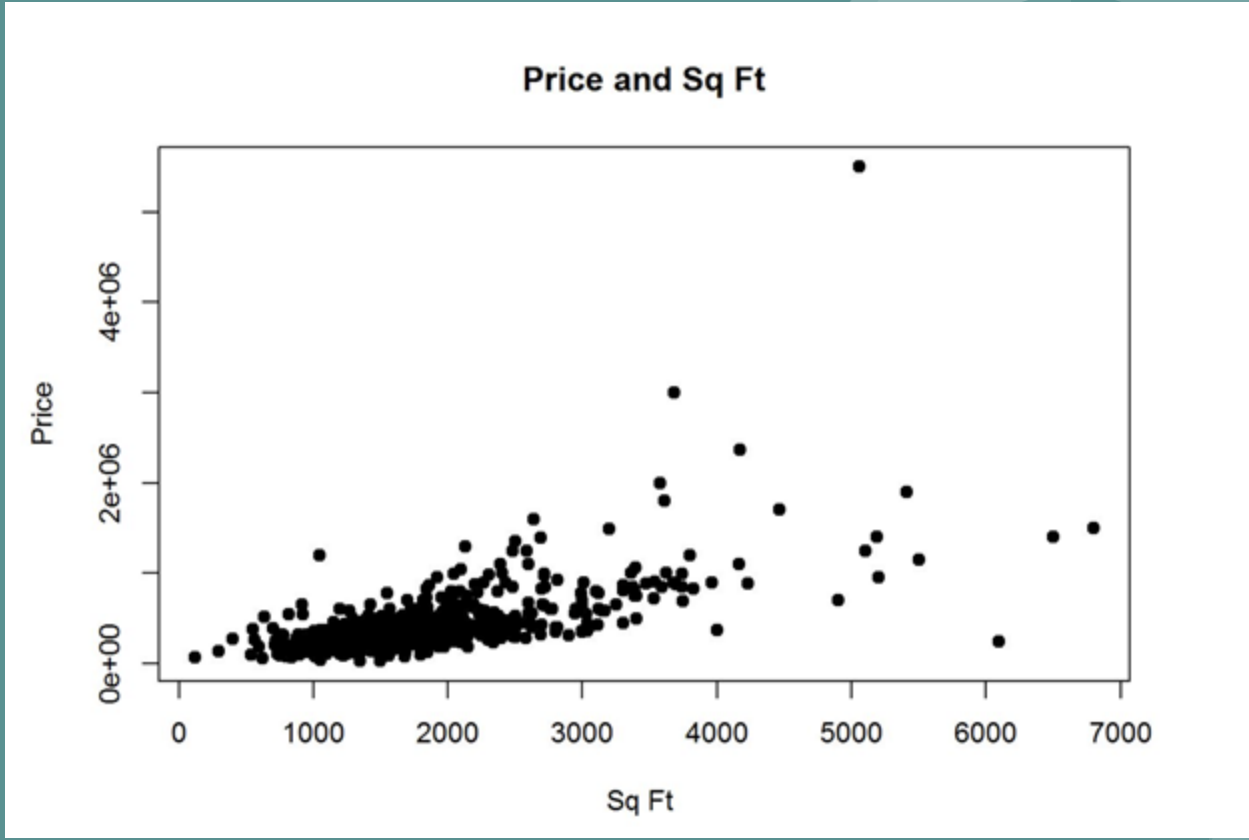
“Artificial intelligence (AI) is the broader field focused on creating machines capable of performing tasks that mimic human intelligence, such as reasoning, planning, and language understanding. Machine learning (ML), a subset of AI, specifically involves algorithms that enable machines to learn from data and improve automatically, without explicit programming for each task.” - GPT-4o

What You Can Expect to Learn

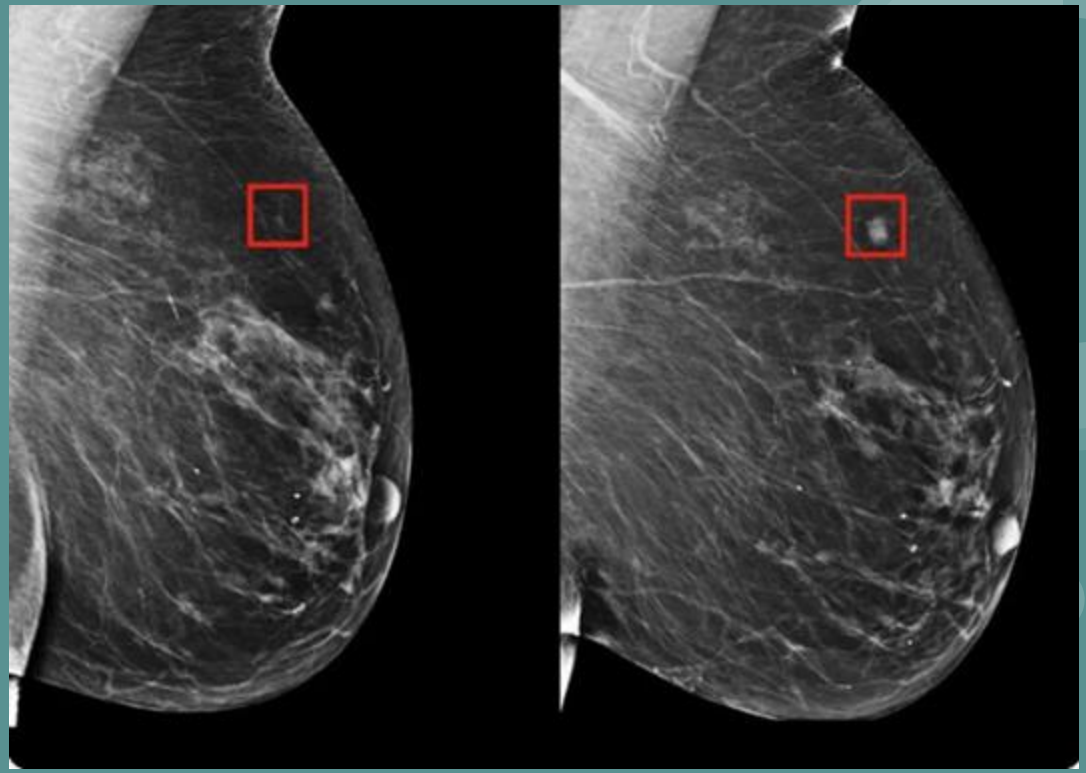
- Supervised Learning
  - Simple Linear Regression
  - Multiple Linear Regression
  - Logistic regression
  - Time Series
- Deep Learning
  - Neural Networks
  - Convolutional Neural Networks
  - Recurrent Neural Nets (RNNs, LSTMs)

- Unsupervised Learning
- Reinforcement Learning (RL)

Supervised Learning



Cancer Detection 5 Years in Advance

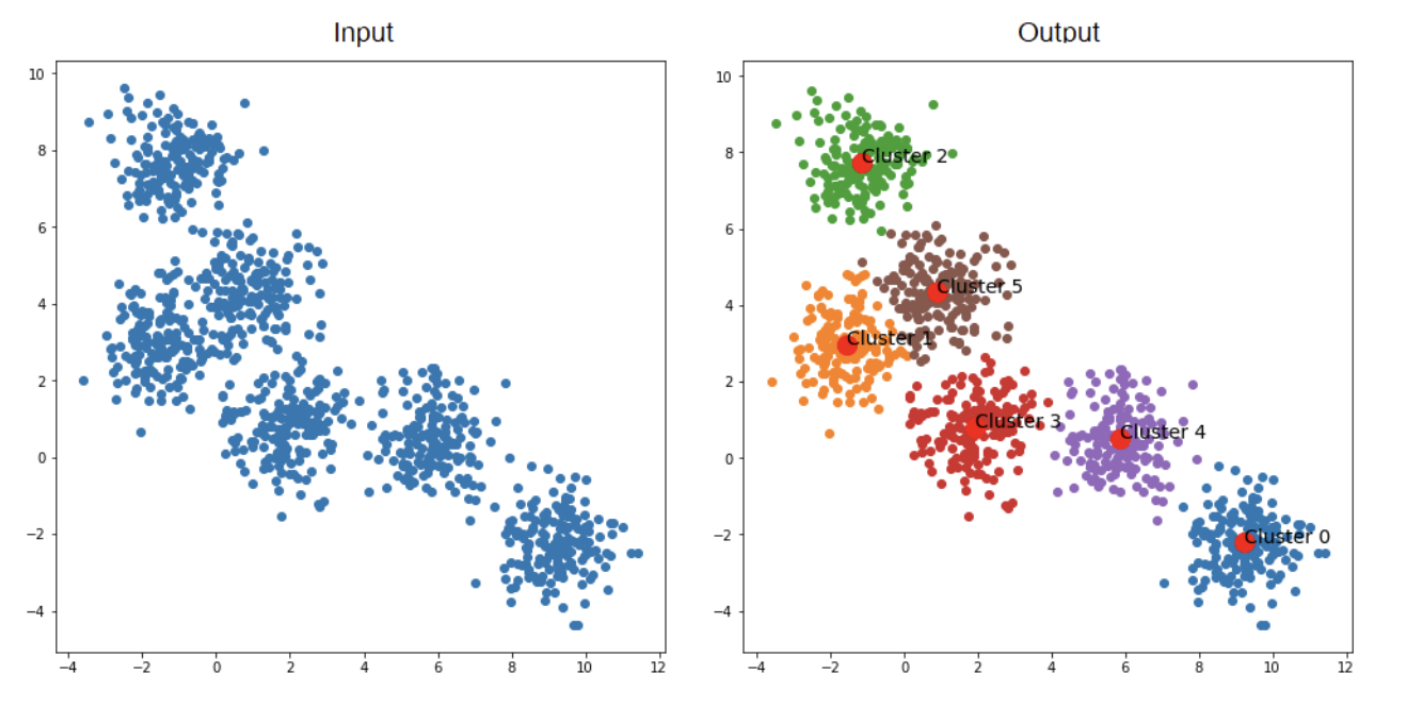


https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2824353#:~:text=In%20this%20retrospective%20population%2Dbased,to%206%20years%20before%20diagnosis.

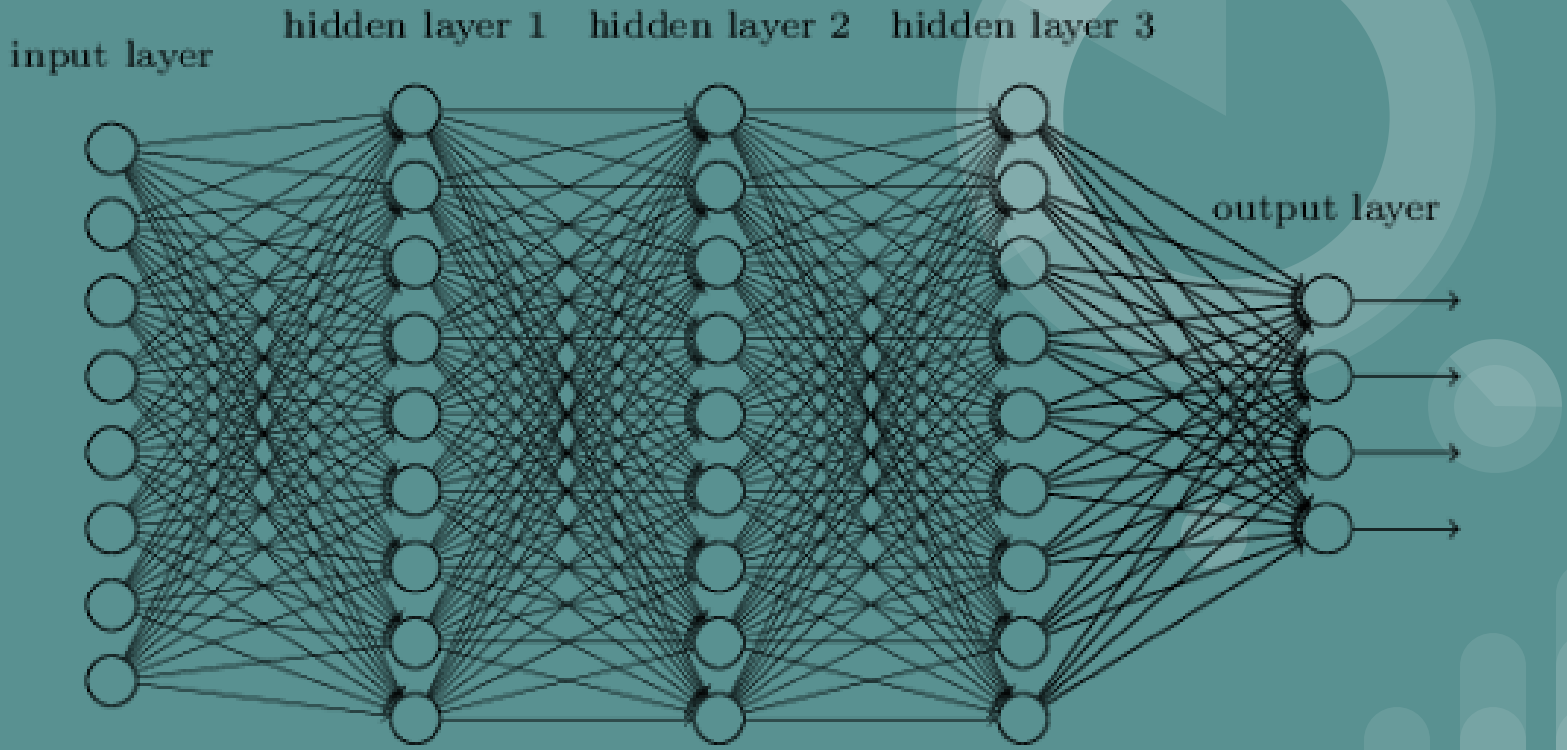
Applications

Application	Input `X`	Output `Y`
Email spam detection	Emails	spam or not
Image Classification	Images (mixed)	Cat / Dog
Self-driving car	Images, sensors	move or not
House price prediction	Area, floors	Price

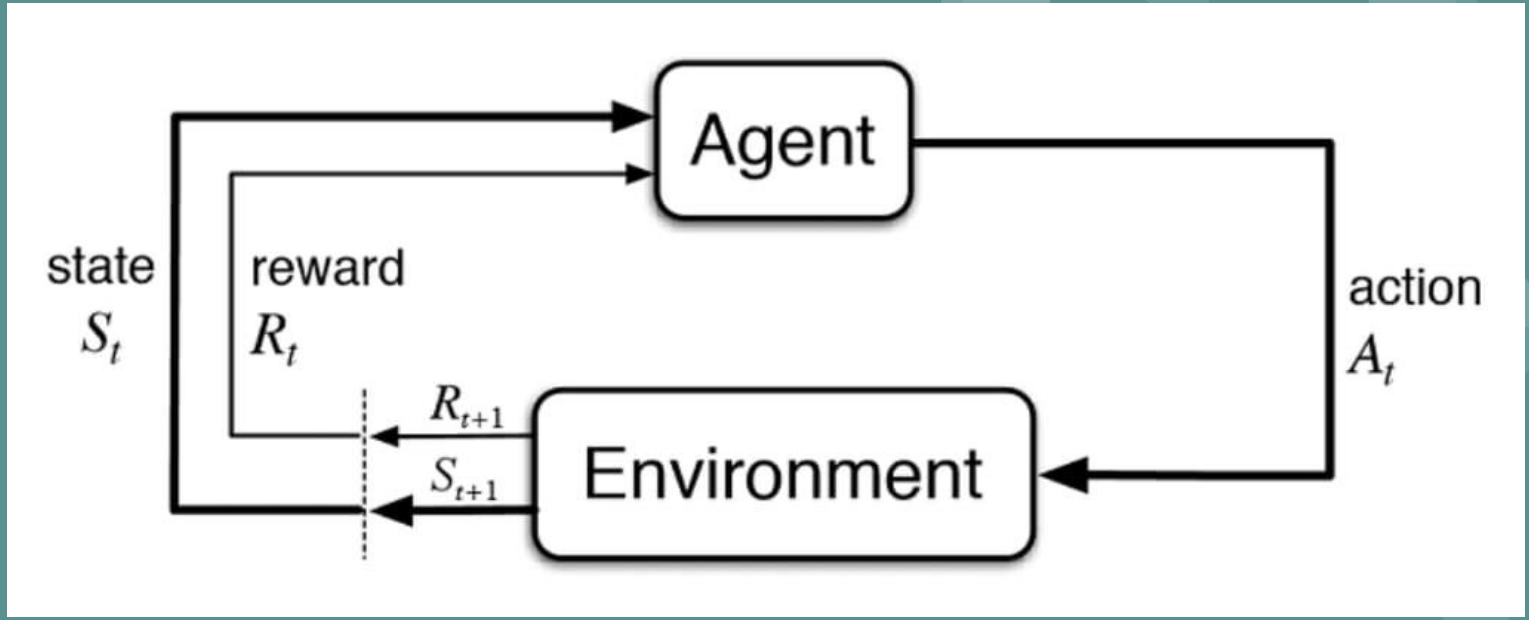
Clustering


Input
Output
Cluster 2
Cluster 5
Cluster 1
Cluster 3
Cluster 4
Cluster 0

Deep Learning

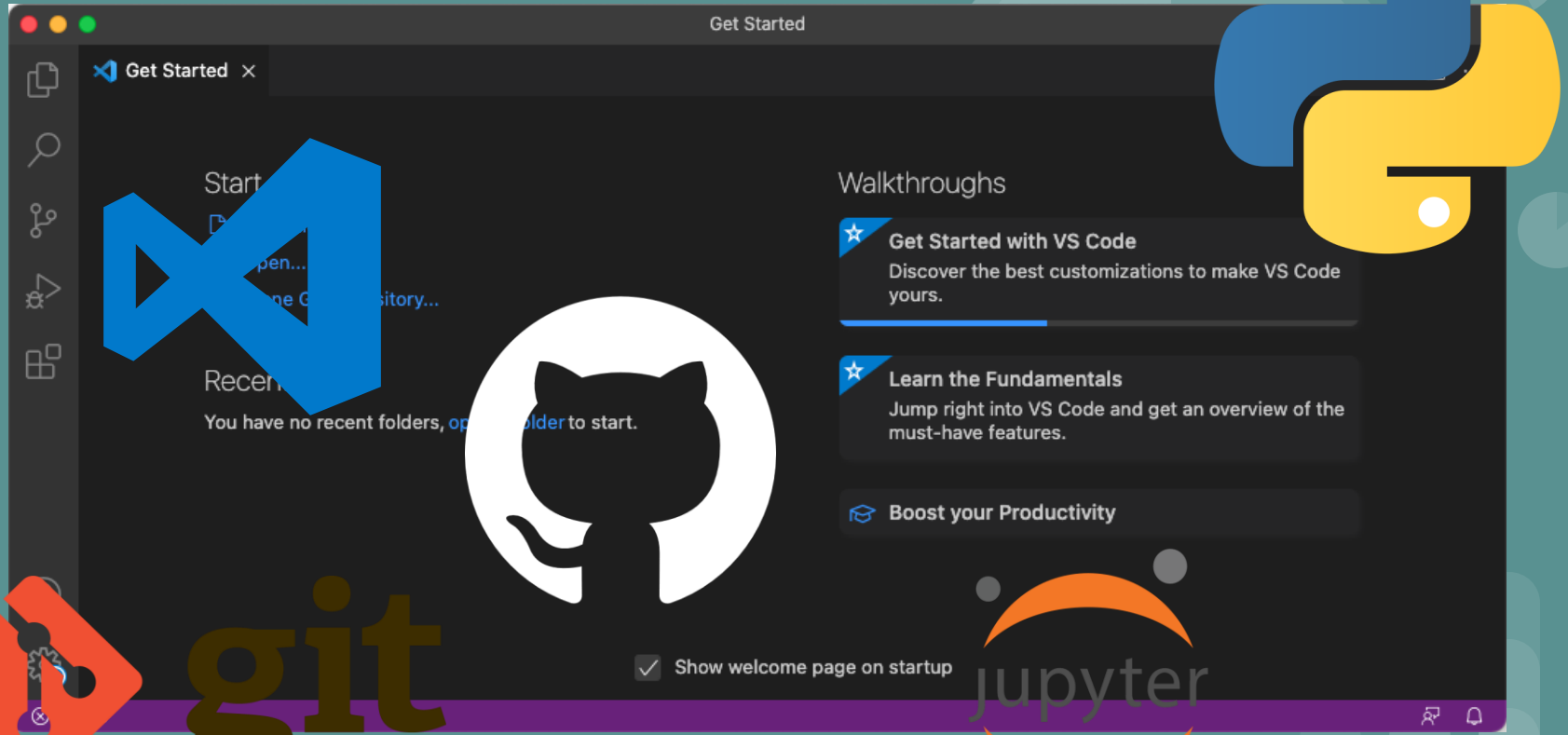


Reinforcement Learning



Software

InteractiveBrokers



git

jupyter

Let's Introduce the Teams...