



Universitat
de les Illes Balears

Aprenentatge Automàtic I

Miquel Miró Nicolau

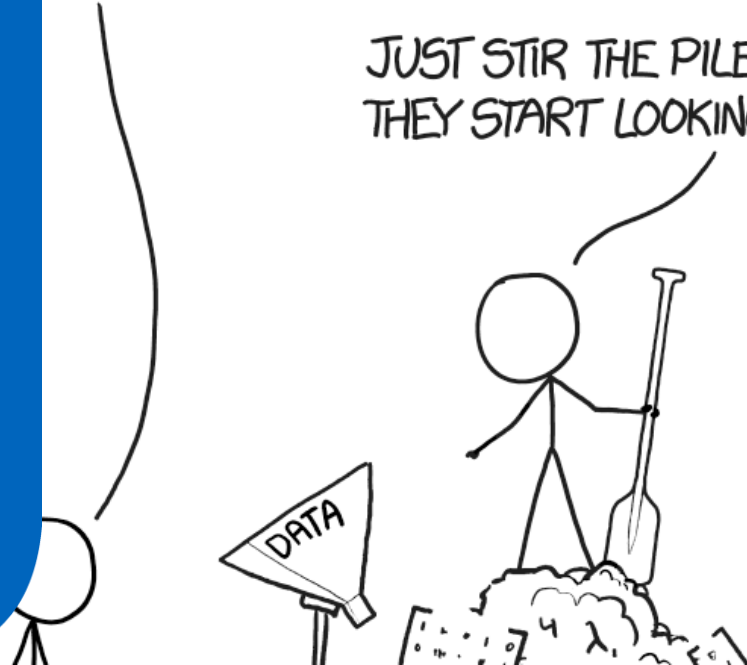
14/11/2022

THIS IS YOUR MACHINE LEARNING SYSTEM?

YUP! YOU POUR THE DATA INTO THIS BIG PILE OF LINEAR ALGEBRA, THEN COLLECT THE ANSWERS ON THE OTHER SIDE.

WHAT IF THE ANSWERS ARE WRONG?

JUST STIR THE PILE UNTIL THEY START LOOKING RIGHT.





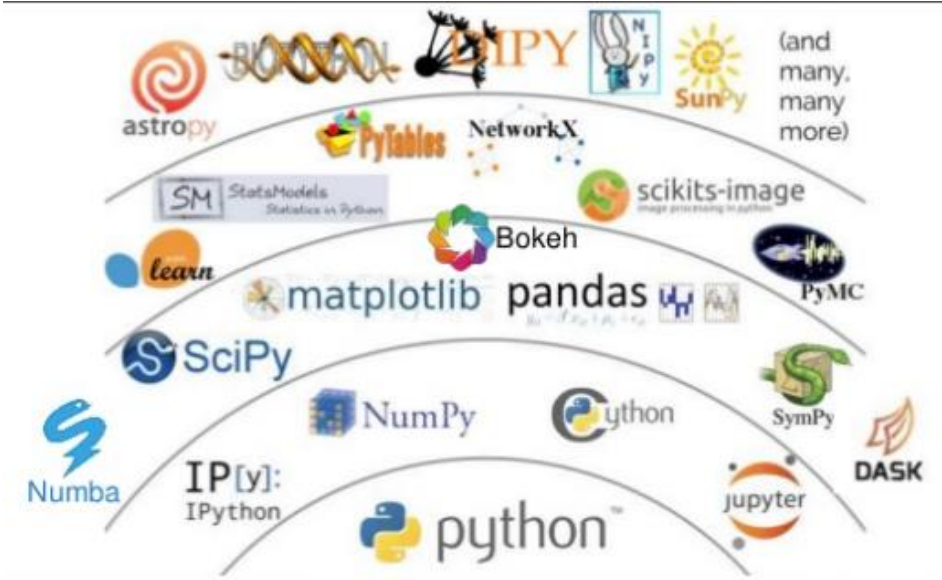
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Entorn

- Python 3.10
- Numpy
- Scikit-learn
- Matplotlib
- **Jupyter**

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 jupyter

QuitLogout

FilesRunningClusters

Select items to perform actions on them.

UploadNew

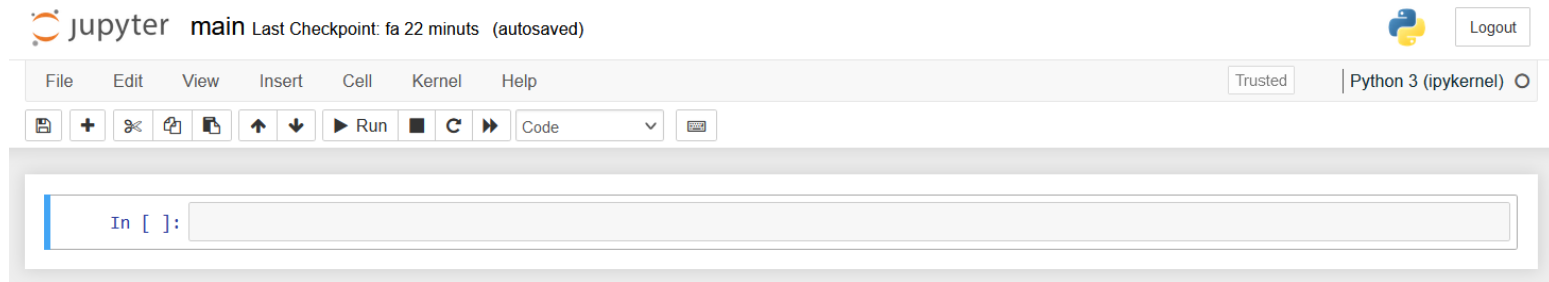
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/ Development / ia_2022

NameLast ModifiedFile size

<input type="checkbox"/>	..	fa uns segons	
<input type="checkbox"/>	aspirador	fa 20 dies	
<input type="checkbox"/>	assets	fa 23 dies	
<input type="checkbox"/>	ia_2022	fa 21 dies	
<input type="checkbox"/>	monedes	fa 5 dies	
<input type="checkbox"/>	perceptro	fa 16 minuts	
<input type="checkbox"/>	practica1	fa 5 dies	
<input type="checkbox"/>	quiques	fa 20 dies	
<input type="checkbox"/>	solucions	fa 5 dies	
<input type="checkbox"/>	README.md	fa 2 mesos	534 B
<input type="checkbox"/>	requirements.txt	fa 2 mesos	97 B

- **Jupyter:** Combina Python i Markdown.
















“

Markdown is a text-to-HTML conversion tool for web writers.

Markdown allows you to write using an easy-to-read, easy-to-write plain text format, then convert it to structurally valid XHTML (or HTML).










BASIC MARKDOWN ELEMENTS CHEAT SHEET



 Content Element	 Syntax	 What it Looks Like
 Heading	<code># H1</code> <code>## H2</code> <code>### H3</code>	# This is an H1 ## This is an H2 ### This is an H3
 Bold	<code>**bold text**</code>	This what makes text look **bold** in a sentence
 Italic	<code>*italicized text*</code>	and this is how to make <i>*italics*</i> in text
 Blockquote	<code>> blockquote</code>	You can block quote a piece of text with the greater than symbol
 Orderd List	1. First item 2. Second item 3. Third item	And if you want to create a numbered or ordered list, <code> </code> in HTML, just add the number followed by a full stop. 1. First item in the list 2. Second item in the list 3. Third item
 Unordered List	- First item - Second item - Third item	while the unordered list equivalent is created with only a dash - like so: - this list - is not ordered - at all
 Code	<code>`code`</code>	And if you're showing a code highlight, it's done through the backquote or <code>`</code> <code>\\this code does nothing except comment</code>
 Horizontal Rule	and once you're done you can use <code>---</code> to create a horizontal rule like so	and once you're done you can use <code>---</code> to create a horizontal rule like so
 Link	[Markdown Cheat Sheet] (http://www.collectiveray.com/markdown-cheat-sheet)	If you want to display a link, use [square brackets] followed by (brackets) like this: Markdown Cheat sheet
 Image	<code>![alt text](image.jpg)</code>	Finally, an image is a punctuation mark <code>!</code> [followed by square brackets for the alt text] (and-brackets-for-the-filename.jpg)

EXTENDED SYNTAX

These elements extend the basic syntax by adding additional features. But be careful, not all Markdown applications support these elements.

 Content Element	 Markdown Syntax	 What it Looks Like								
 Table	Row Name Description ----- ----- Pipes are the separators Dashes with pipes to separate the header from the contents And then as many rows as you need separated by pipes	<table><tr><th>Row Name</th><th>Row Name</th></tr><tr><td>Pipes</td><td>are the separators</td></tr><tr><td>Dashes with pipes</td><td>to separate the header from the contents</td></tr><tr><td>And then as many rows</td><td>as you need separated by pipes</td></tr></table>	Row Name	Row Name	Pipes	are the separators	Dashes with pipes	to separate the header from the contents	And then as many rows	as you need separated by pipes
Row Name	Row Name									
Pipes	are the separators									
Dashes with pipes	to separate the header from the contents									
And then as many rows	as you need separated by pipes									
 Fenced Code Block	<pre>{ "string": "triple backquote for code", "firstName": "David", "lastName": "Attard", "age": 40 }</pre>	<pre>{ "string": "triple backquote for code", "firstName": "David", "lastName": "Attard", "age": 40 }</pre>								
 Footnote or Reference	Here's how to create a reference with a footnote. You can find the markdown cheatsheet here [1] [1]: And here is where you add the [link](https://www.collectiveray.com/markdown-cheat-sheet) as your reference	Here's how to create a reference with a footnote. You can find the markdown cheatsheet here! 1. And here is where you add the link as your reference								
 Definition List	mark down terms : and their definition	mark down terms and their definition								
 Task List	- [x] You can have tasks, checked with an x between dash - and square brackets - [] or dash and square brackets for unchecked	<input checked="" type="checkbox"/> You can have tasks, checked with an x between dash - and square brackets <input type="checkbox"/> or dash and square brackets for unchecked								
 Strikethrough	~~The world is flat.~~	Last but we have the ~~double tilde for strikethrough~~								



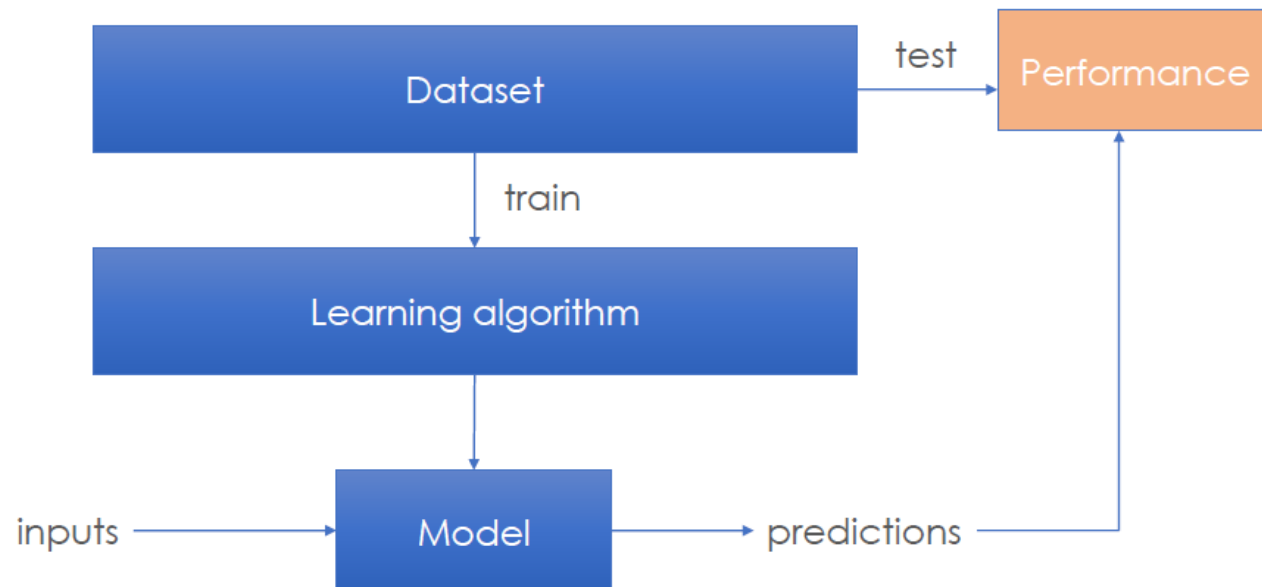


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1, 2, 3 d'aprenentatge
automàtic

1, 2, 3



1. Dades

- Dividim les dades entre train i test:
 - **Train:** Conjunt de dades que s'empren per entrenar el model.
 - **Test:** Conjunt de dades que s'empren per avaluar el model.

2. Entrenament

- Entrenem el model amb dades d'entrenament.
- Seleccionem els millors paràmetres.

3. Mesuram

- Amb les dades de test obtenim mètriques:
 - Accuracy
 - Precision
 - Recall
 - F1-Score



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