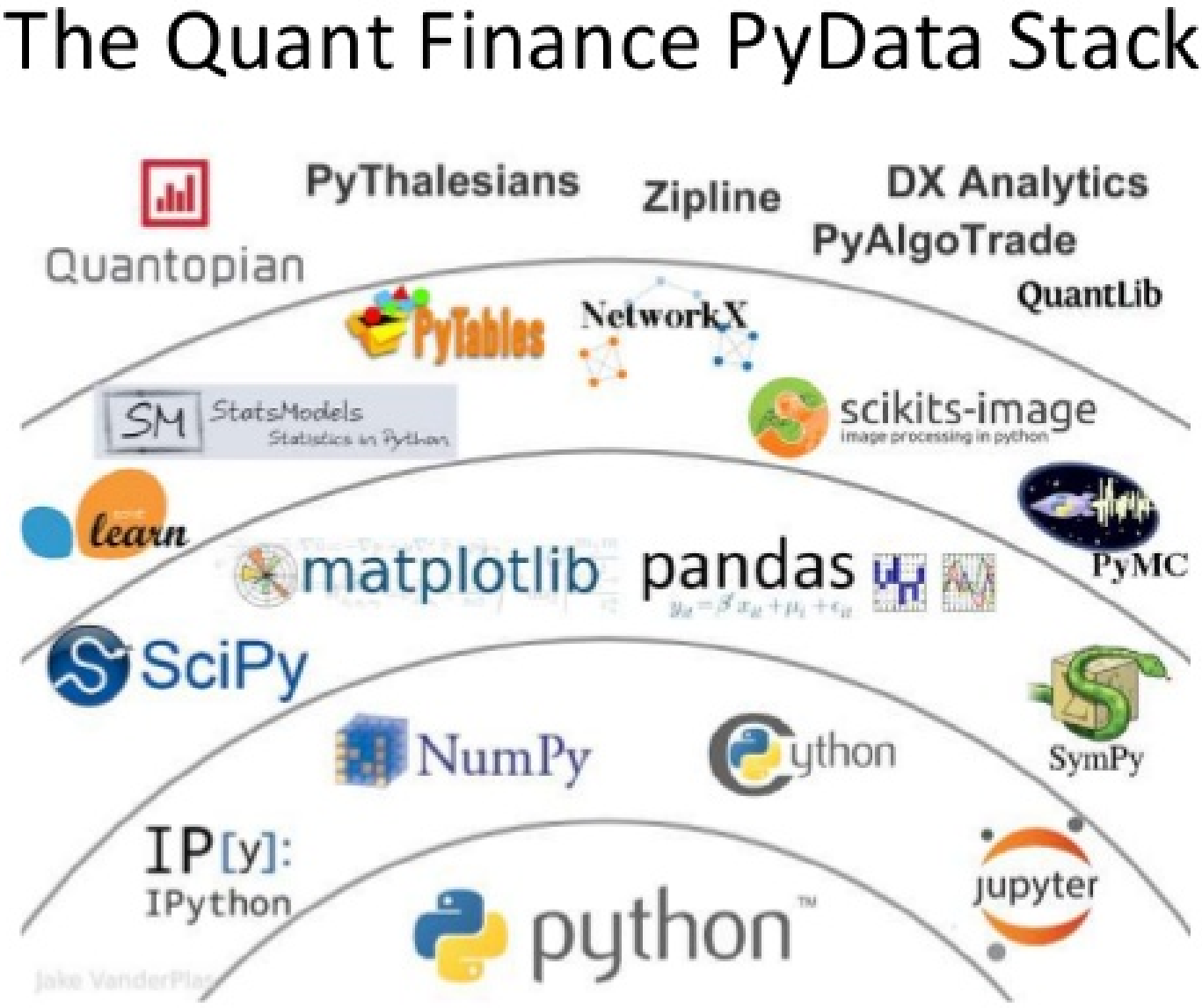
Data Analysis e Machine Learning in Python

Pietro Battiston

Pisa, 29 ottobre 2017
Linux Day

Orientiamoci



- Source: [Jake VanderPlas: State of the Tools]
  - (https://www.youtube.com/watch?v=5GIINDD7qbP4)

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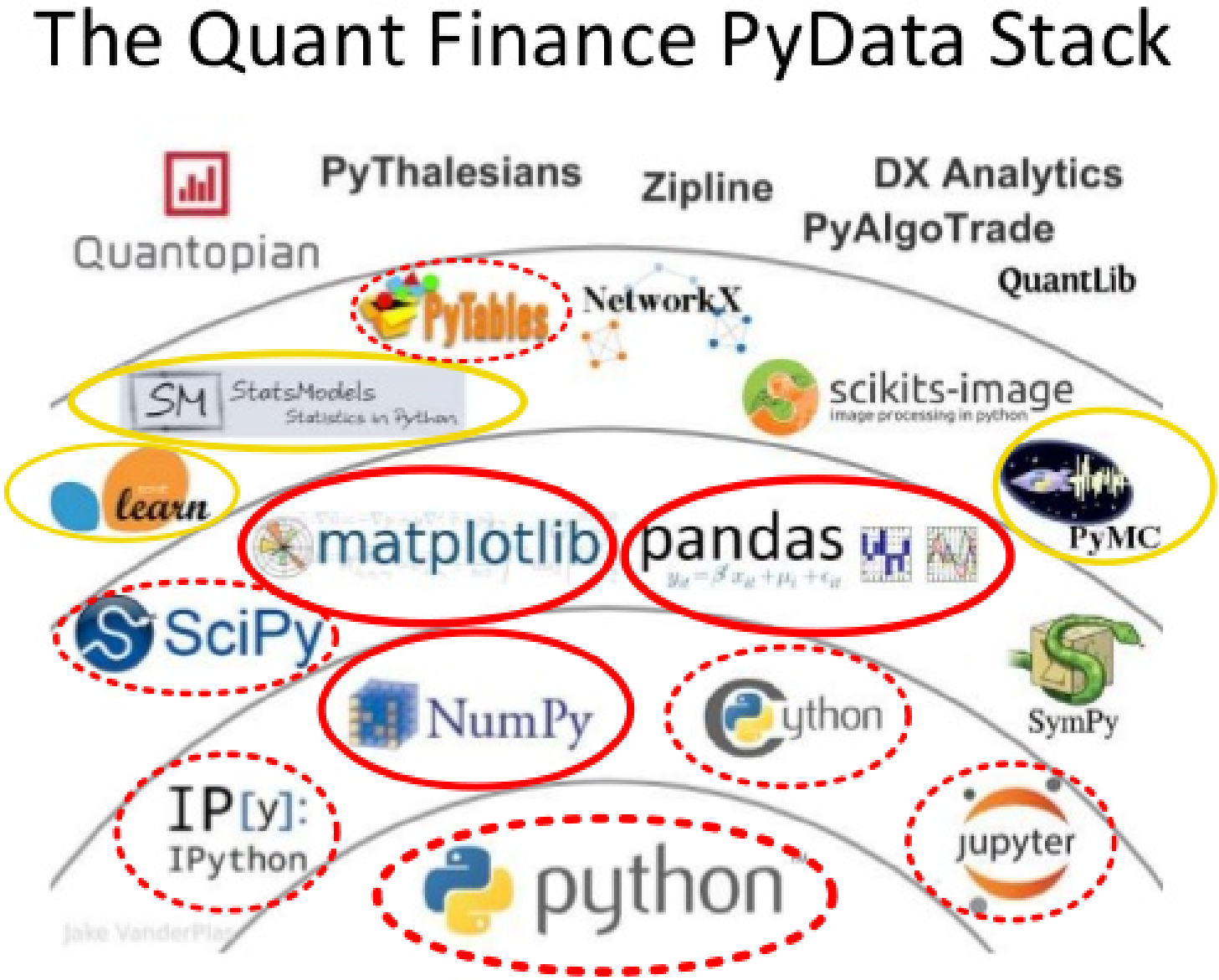

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Cosa possiamo fare con dei dati?

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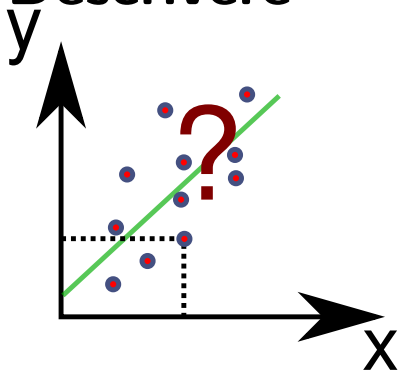

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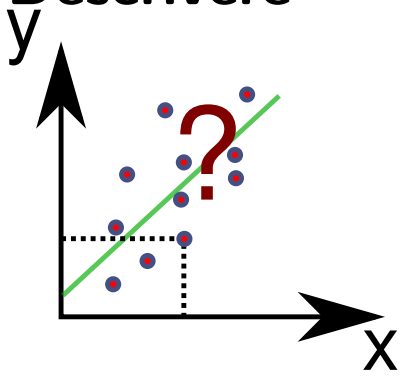

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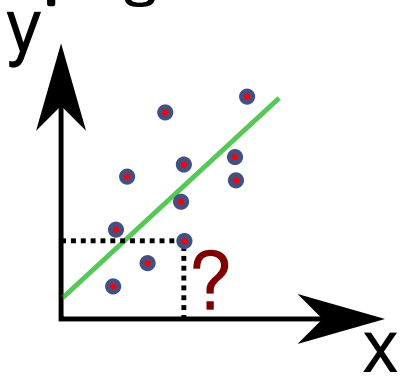

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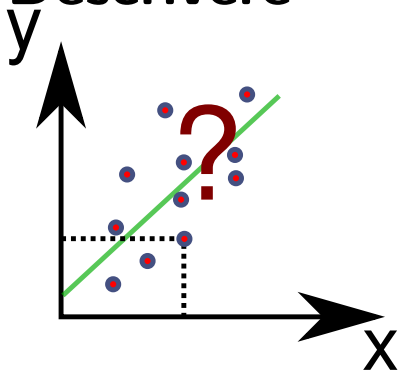

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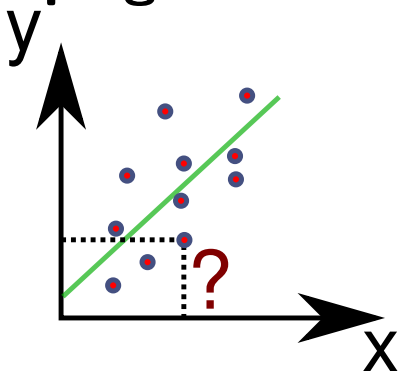

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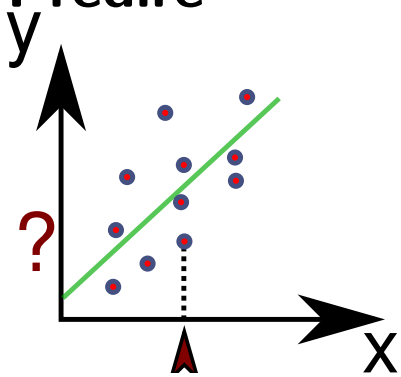

Intanto: i dati

pandas - libreria per la manipolazione dati "etichettati"

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~~Copiata da~~ ispirata a **R**

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Codice!

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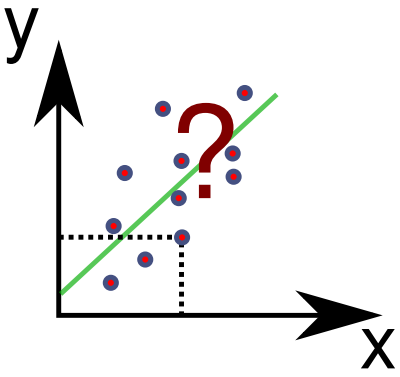
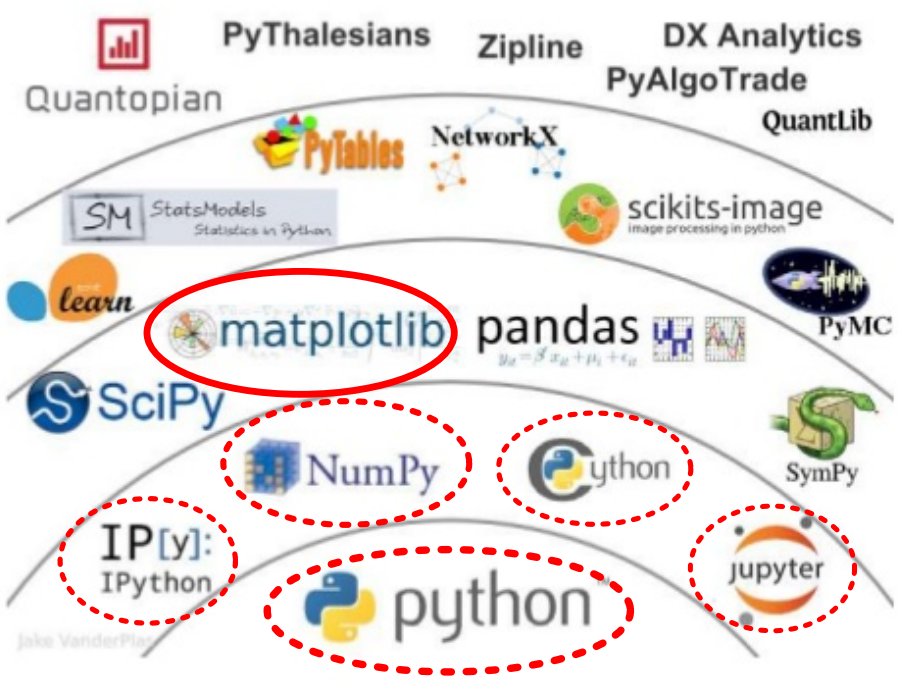


matplotlib - libreria per la *visualizzazione* dei dati



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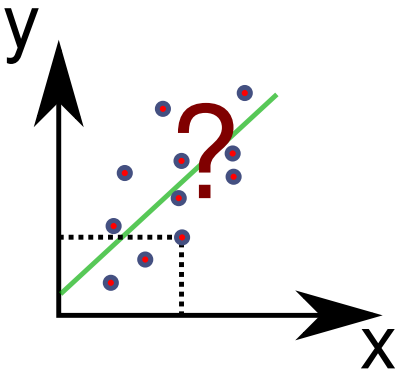

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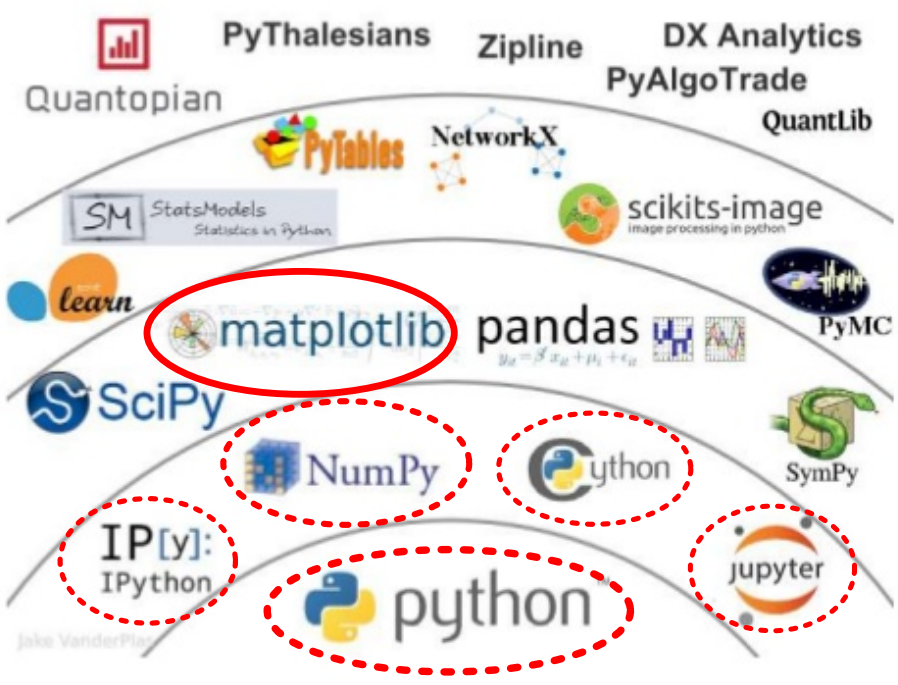

bokeh - sul web, **seaborn** - più alto livello

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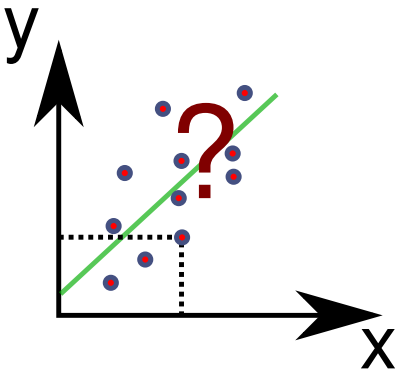

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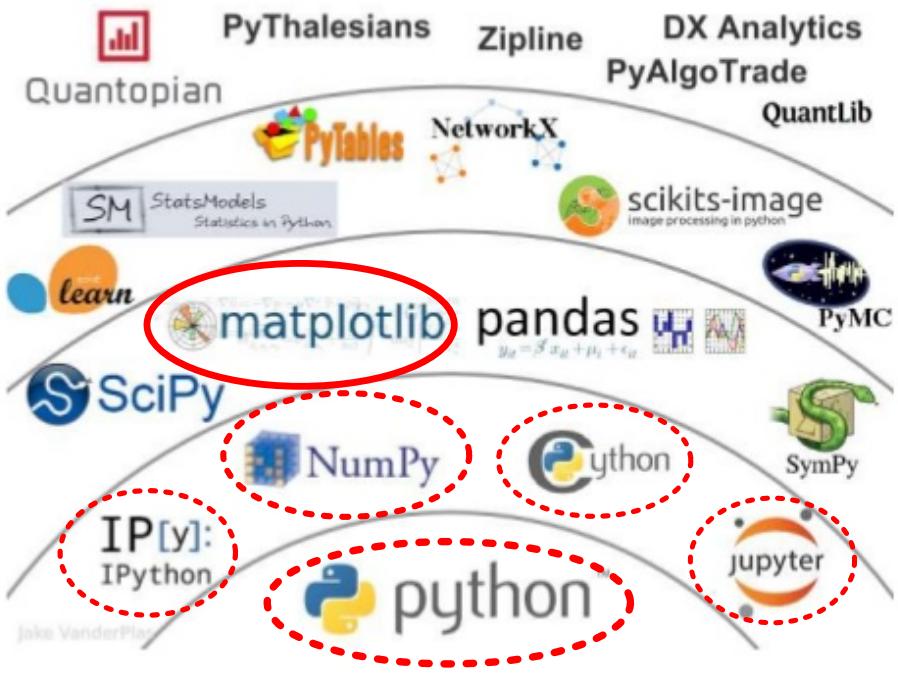

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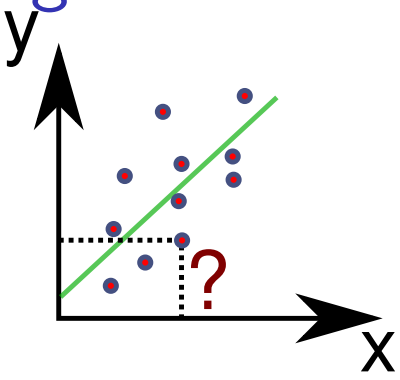
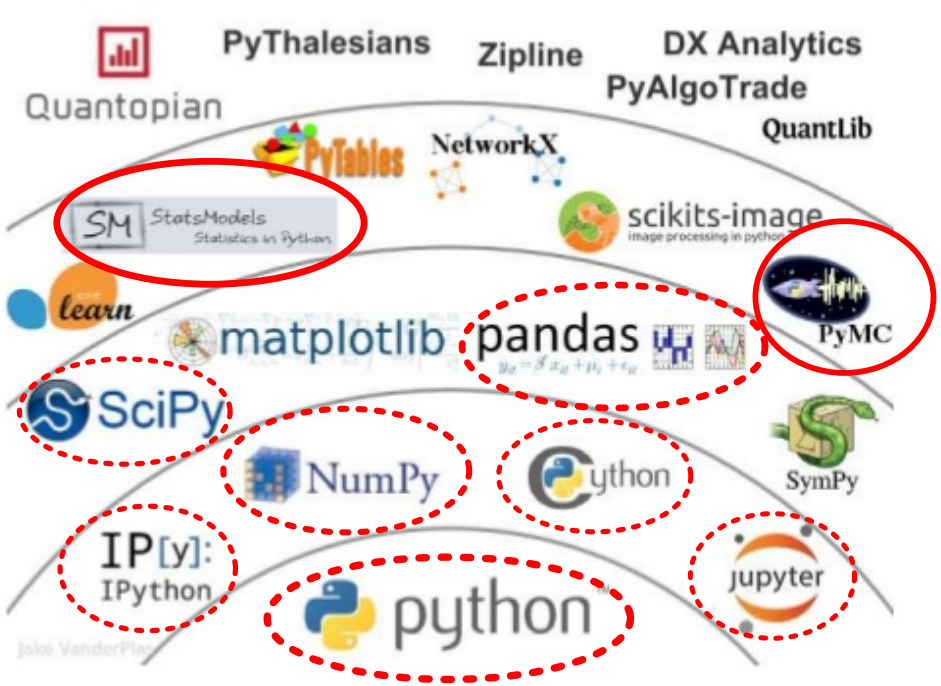


statsmodels - libreria per l'analisi statistica *classica*



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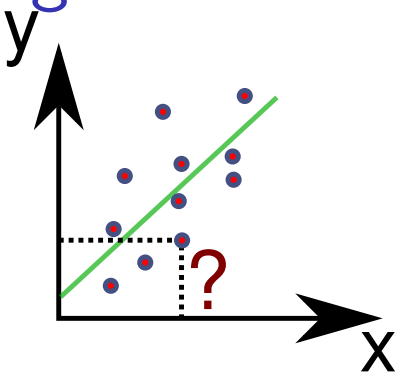

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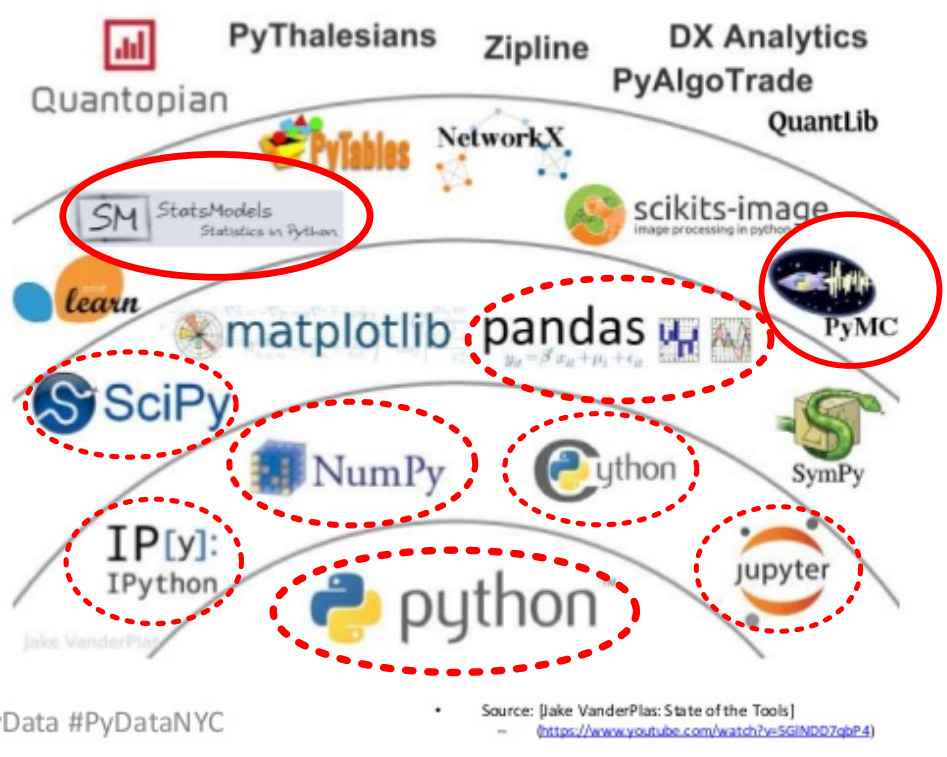

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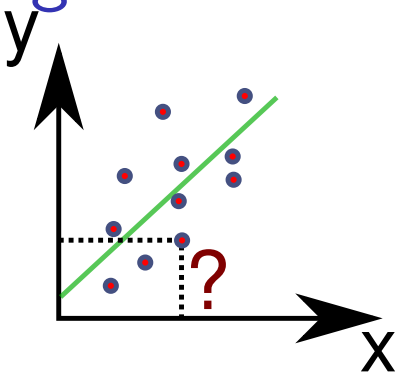

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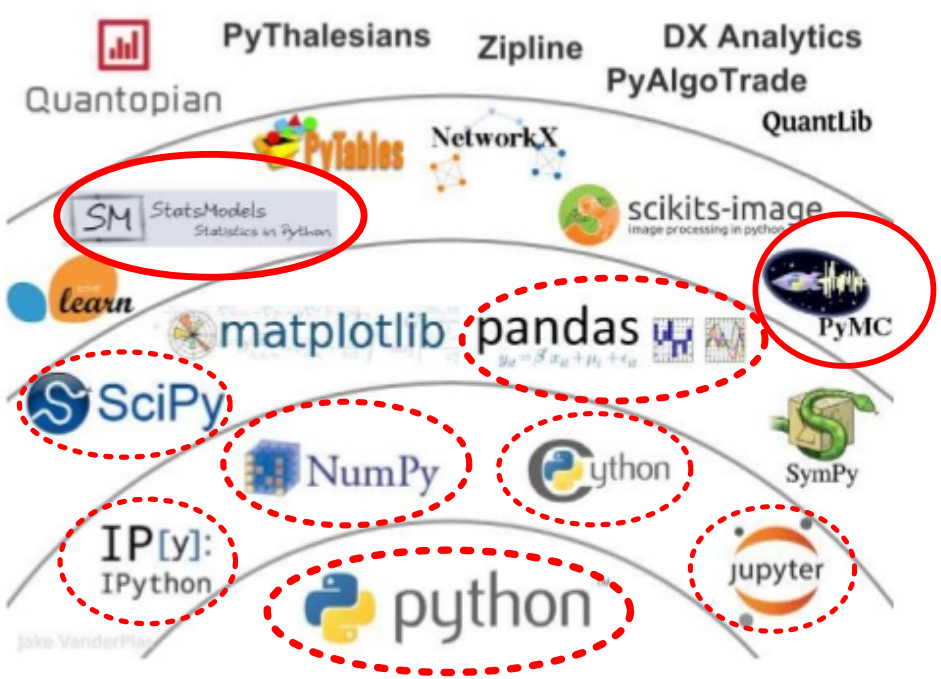

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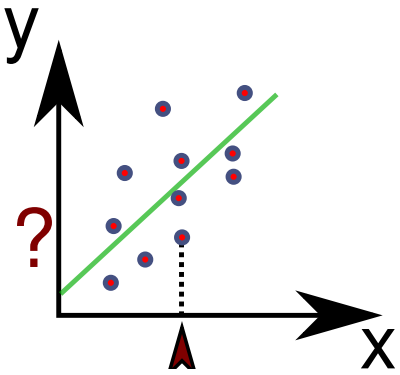
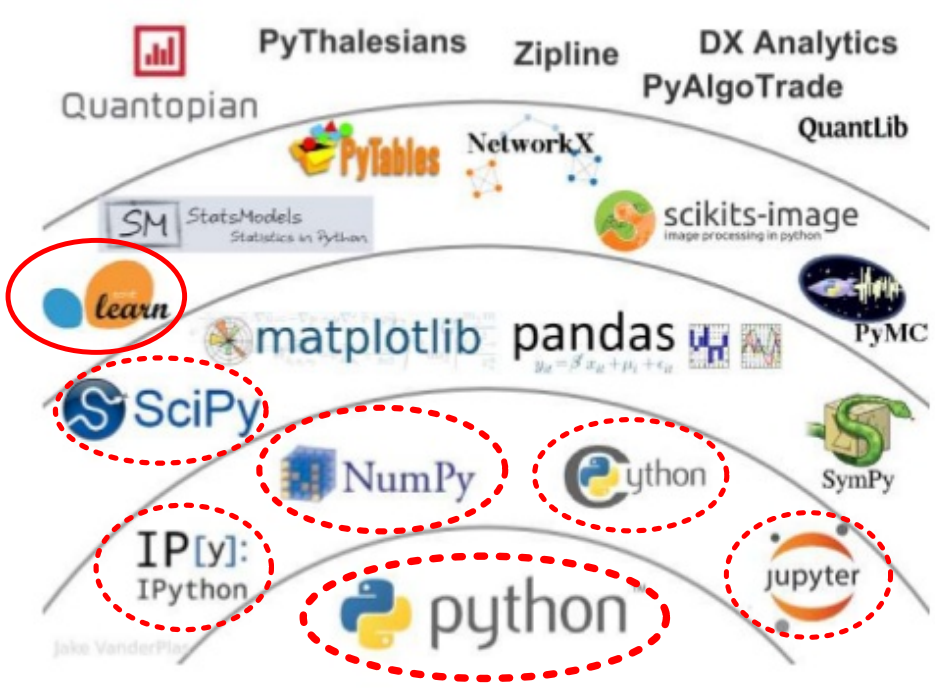


scikit-learn - libreria per machine learning



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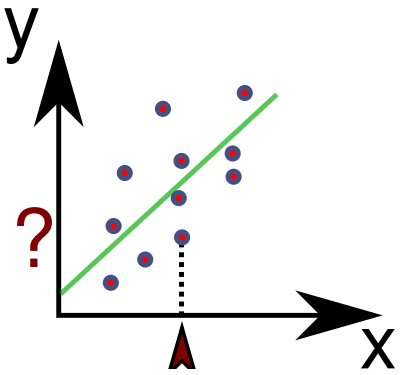

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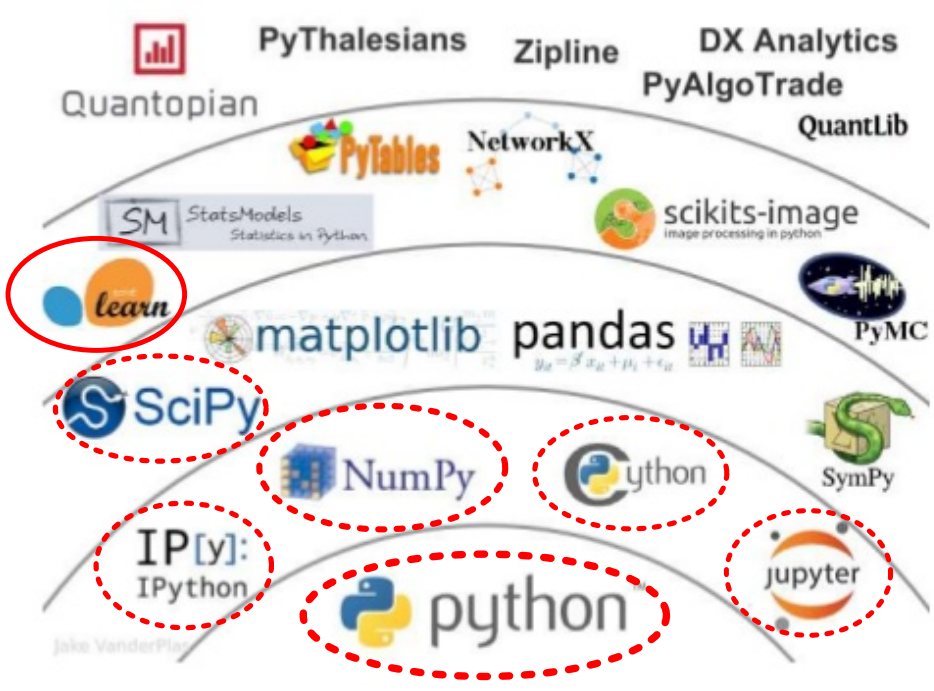

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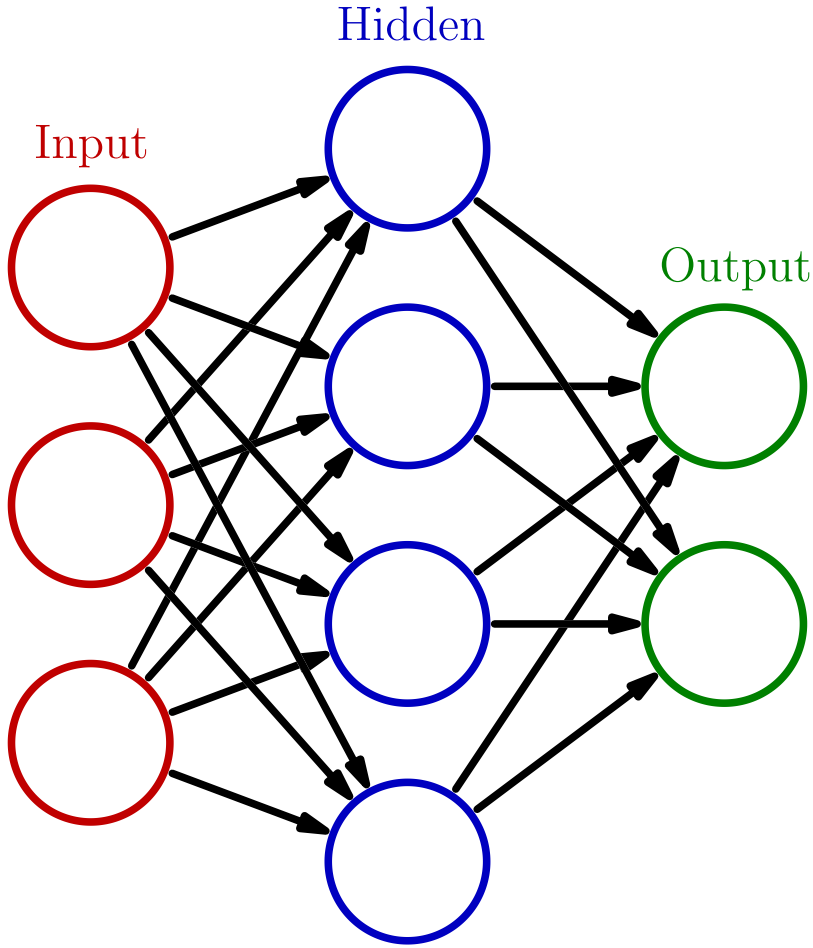
Codice!

Predire - con le reti neurali



Tensorflow, Theano, Keras, Caffe, Torch... - specifiche per neural networks

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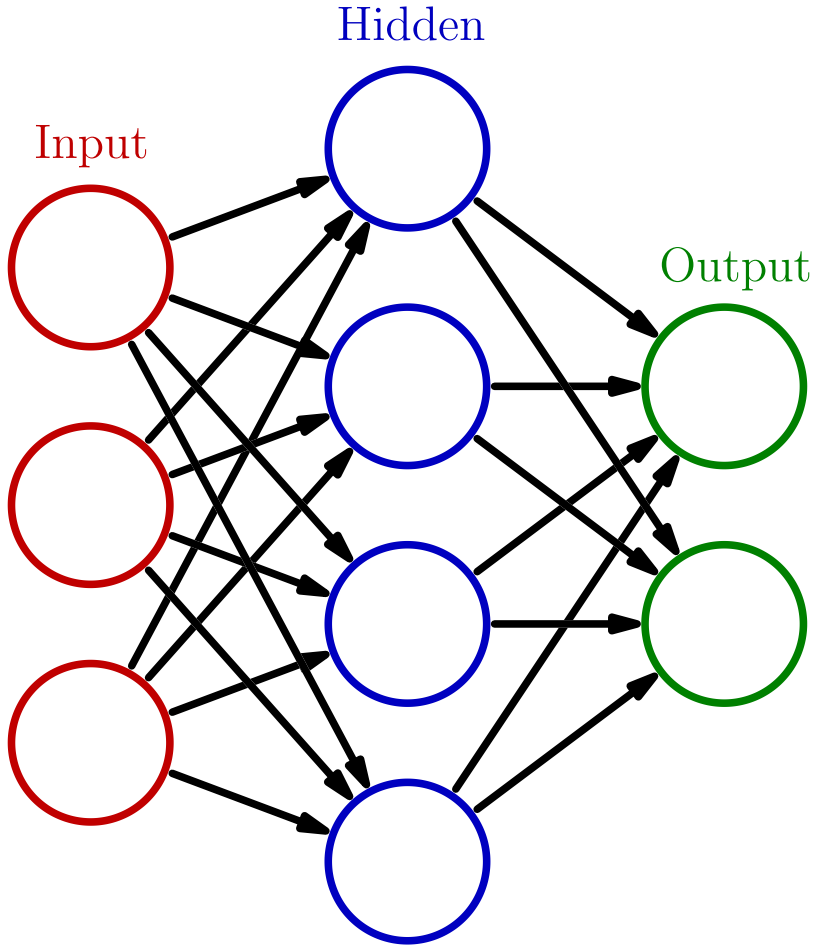

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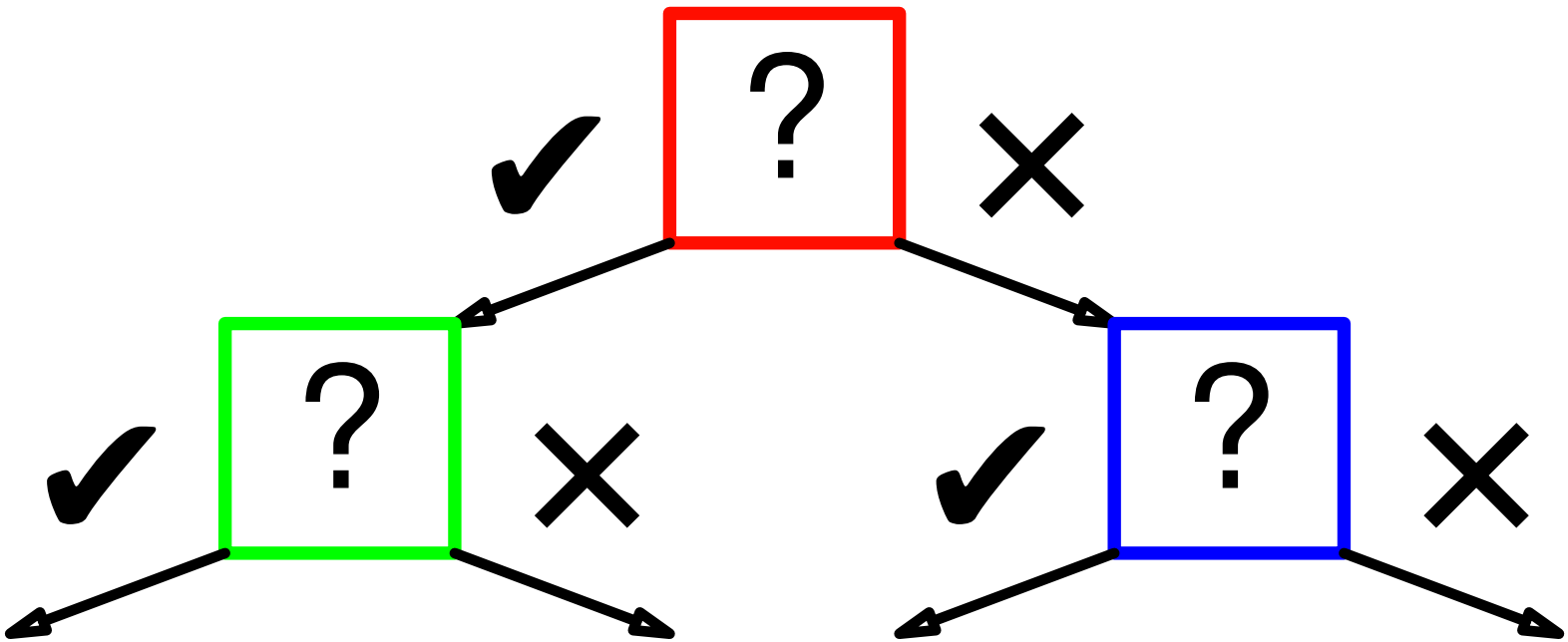

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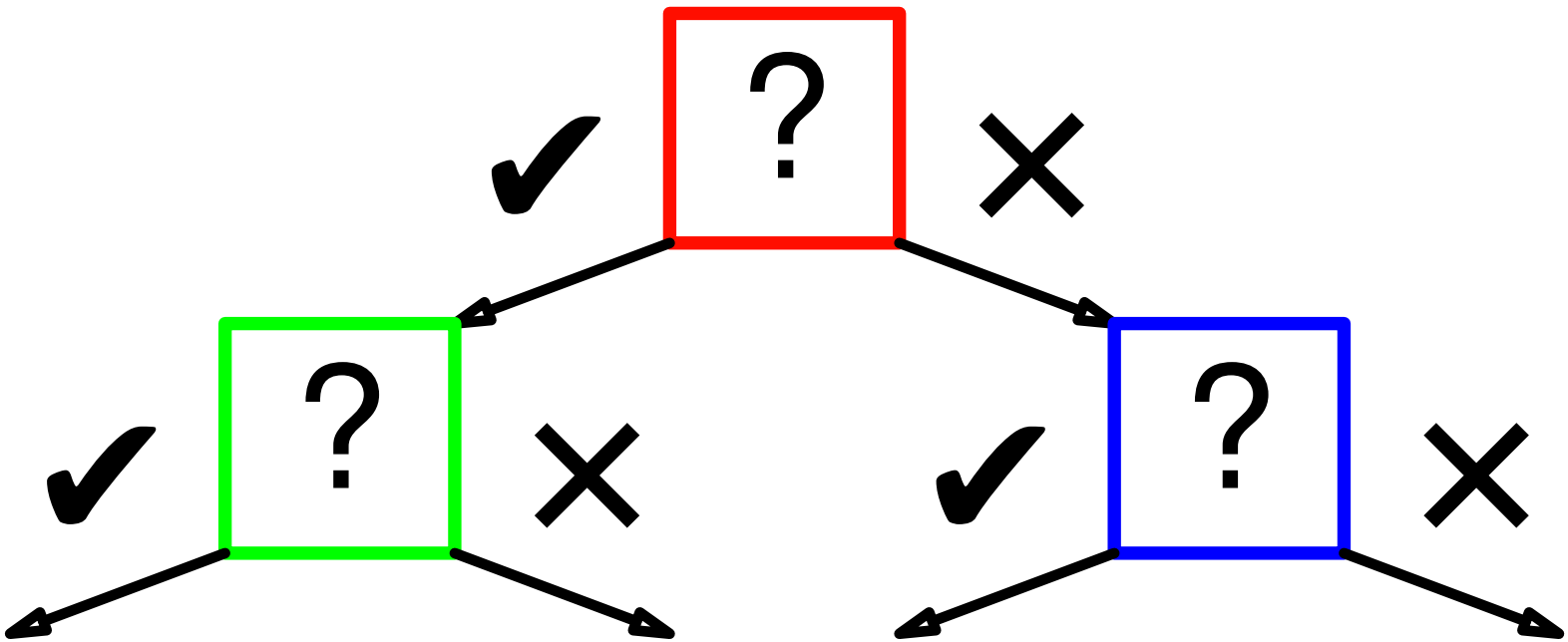

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Python o R?

Entrambi - rpy2

Credits

- Mappa dello stack Python per data analysis: **Jessica Stauth**: `https://www.slideshare.net/JessStauth/pydata-nyc-2015`
- **Wikipedia** per l'immagine del neural network: `https://en.wikipedia.org/wiki/File:Colored_neural_network.svg`