

Inteligência Artificial, Ciência de Dados e Estatística: trajetória, dicas e desafios

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slides: bit.ly/csbc-wit

Gabriela de Queiroz

Sr. Engineering and Data Science Manager, IBM

- Fundadora do R-Ladies (rladies.org)
- Fundadora do AI Inclusive (ai-inclusive.org)



- Graduação em Estatística (UERJ)
- Mestrado em Epidemiologia (ENSP/Fiocruz)
- Mestrado em Estatística (CSUEB)

Data Scientist + Developer Advocate + Open Source Developer + Manager +
Statistician + Epidemiologist + Community Builder + Mentor + Speaker + Educator



R-Ladies

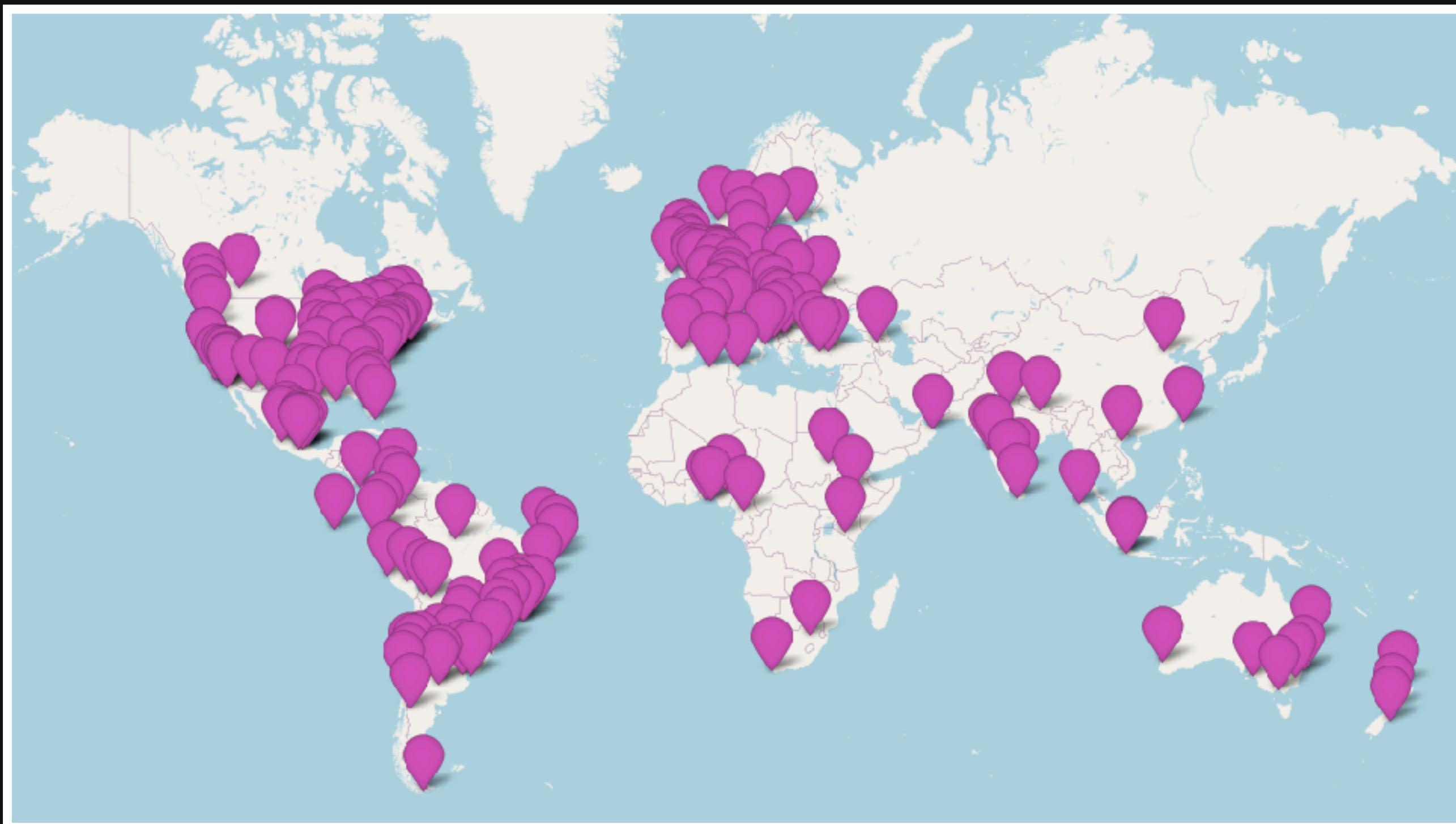
rladies.org

Worldwide organization that promotes

diversity in the R community via meetups

and mentorship in a friendly and safe

environment





AI Inclusive

Together, we are building a community to make **AI** more **inclusive** to everyone.

Missão: Aumentar a **representatividade** e **participação** de minorias em Inteligência Artificial

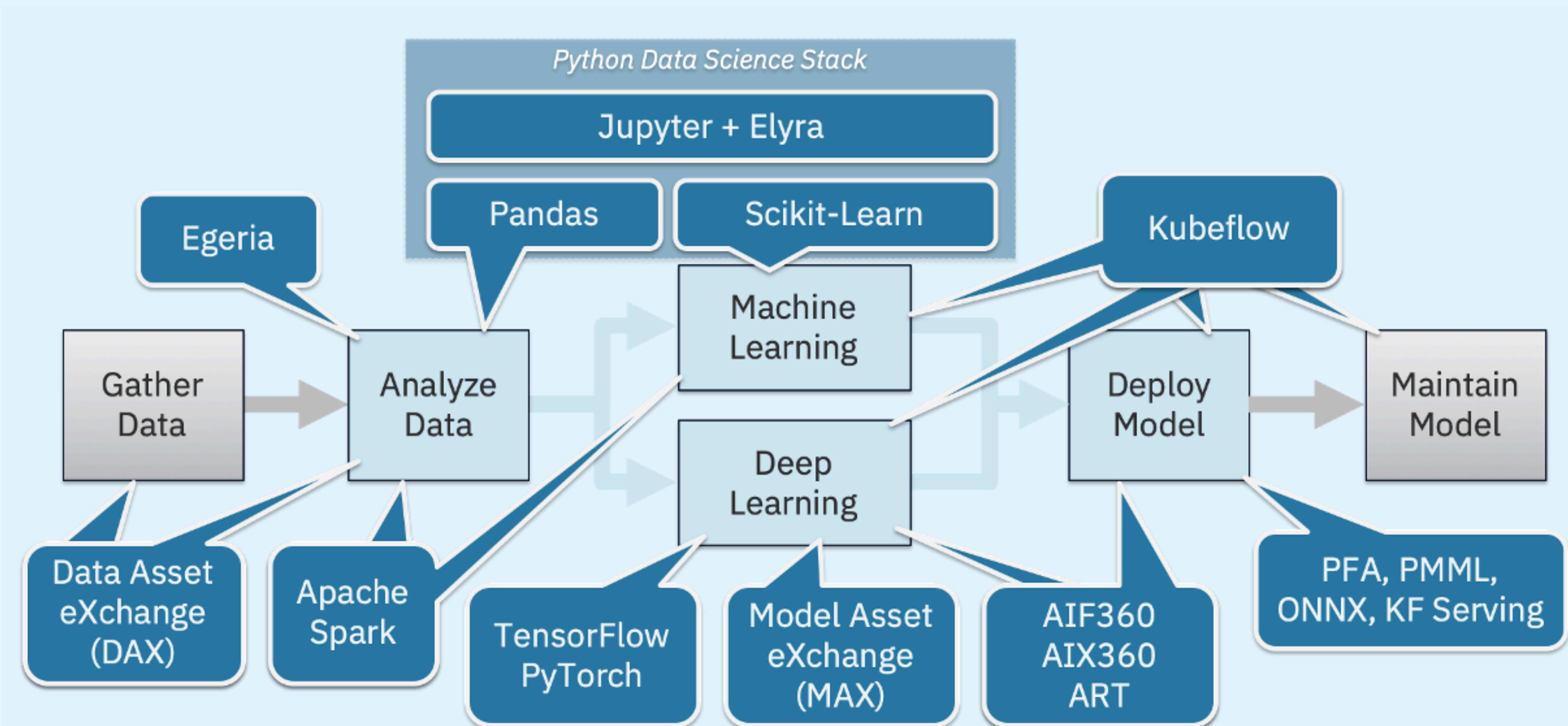
- Website: ai-inclusive.org
- Twitter: bit.ly/ai-inclusive-twitter
- Facebook: bit.ly/ai-inclusive-facebook
- Instagram: bit.ly/ai-inclusive-instagram
- Youtube: bit.ly/ai-inclusive-youtube

Capítulos no Rio de Janeiro, Salvador e em San Francisco (EUA)

Se tiver interesse em criar um capítulo, é só enviar um email: info@ai-inclusive.org

We build tools to make AI accessible and available to everybody

(codait.org)



Model Asset eXchange

Model Asset eXchange

Free, deployable, and trainable code. A place for developers to find and use free and open source deep learning models.

Try the tutorial →
Join the community →

Featured Deployable Trainable

Model Deployable Toxic Comment Classifier Detect 6 types of toxicity in user comments Jun 04, 2019 →	Model Deployable, Trainable Text Sentiment Classifier Detect the sentiment captured in short pieces of text Mar 29, 2019 →	Model Deployable, Trainable Image Segmenter Identify objects in an image, additionally assigning each pixel of the image to a particular object. Sep 21, 2018 →
Model Deployable, Trainable Object Detector Localize and identify multiple objects in a single image. Sep 21, 2018 →	Model Deployable Audio Classifier Identify sounds in short audio clips. Sep 21, 2018 →	Model Deployable Image Caption Generator Generate captions that describe the contents of images. Sep 21, 2018 →

Data Asset eXchange

Data Asset eXchange

Explore useful and relevant data sets for enterprise data science

Learn More →
What's New →
Get Involved →

Dataset CSV NOAA Weather Data - JFK Airport June 30, 2020 →	Dataset IOB format Groningen Meaning Bank - Modified May 14, 2020 →	Dataset CSV Fashion-MNIST September 12, 2019 →
Dataset JPG, JSON PubLayNet October 25, 2019 →	Dataset WAV TensorFlow Speech Commands March 17, 2020 →	Dataset PNG, JSON PubTabNet July 20, 2020 →

ibm.biz/model-exchange

ibm.biz/data-exchange

Model Asset eXchange (MAX)

Place for developers/data scientists to find and use
free and **open source** deep learning models

ibm.biz/model-exchange

Model Asset eXchange

Free, deployable, and trainable code. A place for developers to find and use free and open source deep learning models.

Try the tutorial →

Join the community →

[Featured](#) [Deployable](#) [Trainable](#)

Model | Deployable

Toxic Comment Classifier

Detect 6 types of toxicity in user comments

Jun 04, 2019

Model | Deployable, Trainable

Text Sentiment Classifier

Detect the sentiment captured in short pieces of text

Mar 29, 2019

Model | Deployable, Trainable

Image Segmenter

Identify objects in an image, additionally assigning each pixel of the image to a particular object.

Sep 21, 2018

Model | Deployable, Trainable

Object Detector

Localize and identify multiple objects in a single image.

Sep 21, 2018

Model | Deployable

Audio Classifier

Identify sounds in short audio clips.

Sep 21, 2018

Model | Deployable

Image Caption Generator

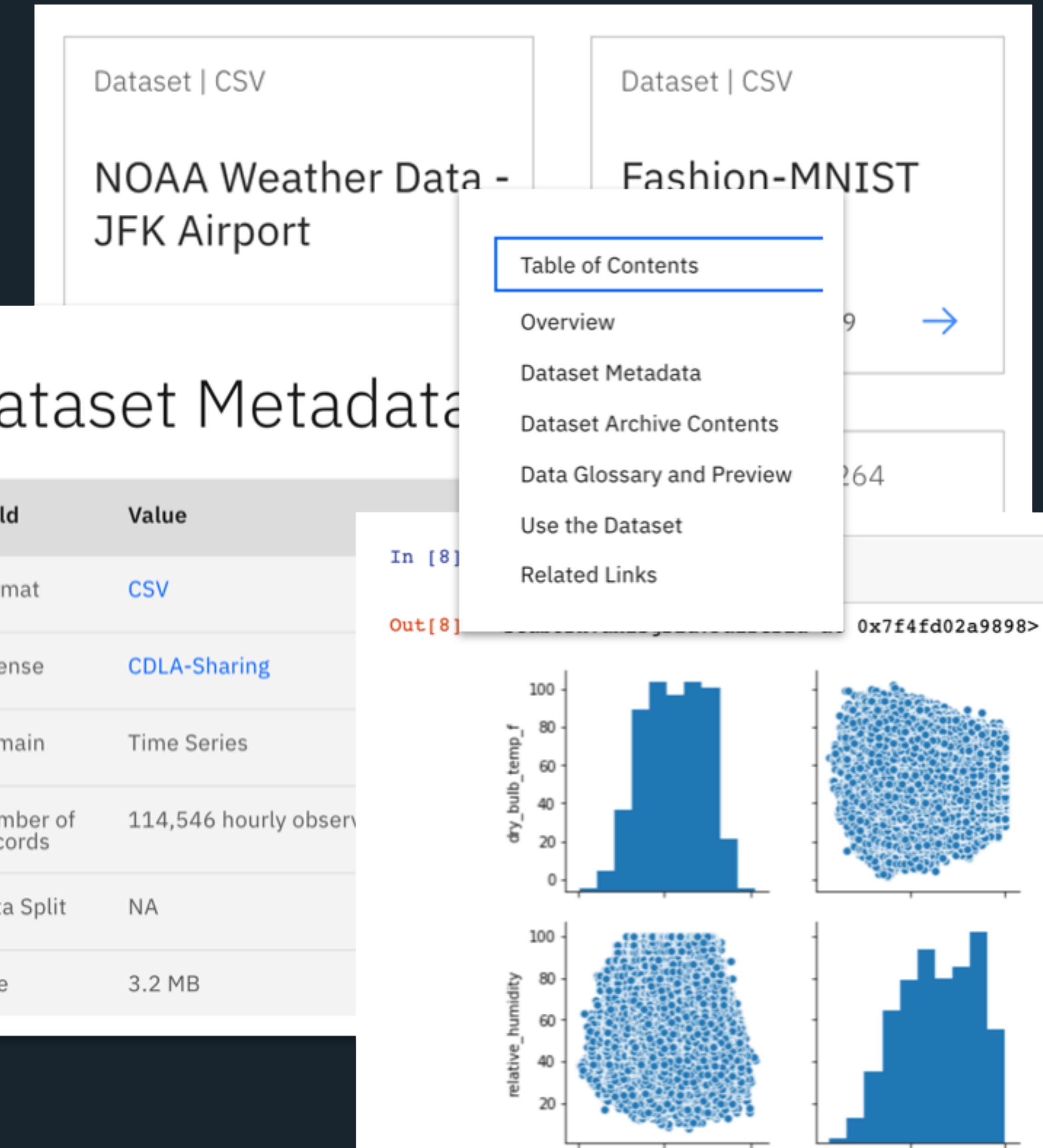
Generate captions that describe the contents of images.

Sep 21, 2018

[View all models](#)

Data Asset eXchange (DAX)

- Curated repository for **open** datasets from IBM Research and third-parties
- Published under data friendly licenses
- Standardized dataset formats and metadata
- Many data sets include starter notebooks (cleansing, data exploration, analysis)

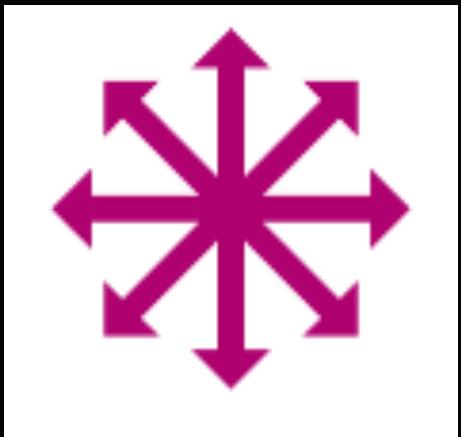


ibm.biz/data-exchange

Trusted AI Lifecycle through Open Source

Pillars of trust, woven into the lifecycle of an AI application

**Did anyone tamper
with it?**



ROBUSTNESS

Adversarial Robustness 360
↳ (ART)

DEMO:
art-demo.mybluemix.net

Is it fair?



FAIRNESS

AI Fairness 360
↳ (AIF360)

DEMO:
aif360.mybluemix.net

Is it easy to understand?

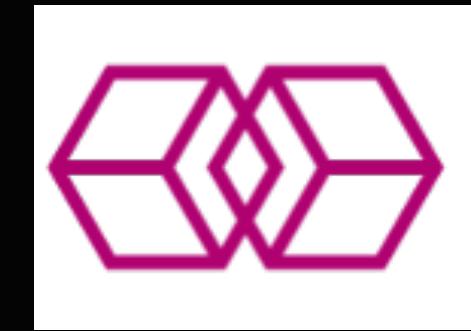


EXPLAINABILITY

AI Explainability 360
↳ (AIX360)

DEMO:
aix360.mybluemix.net

Is it accountable?



LINEAGE

AI FactSheets 360

DEMO:
aifs360.mybluemix.net

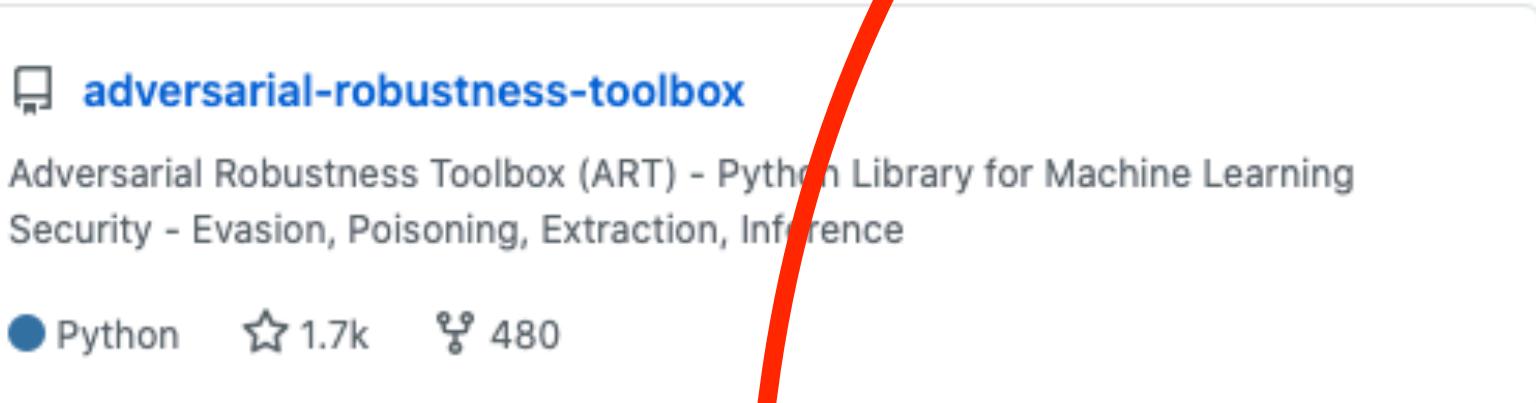
 Trusted-AI

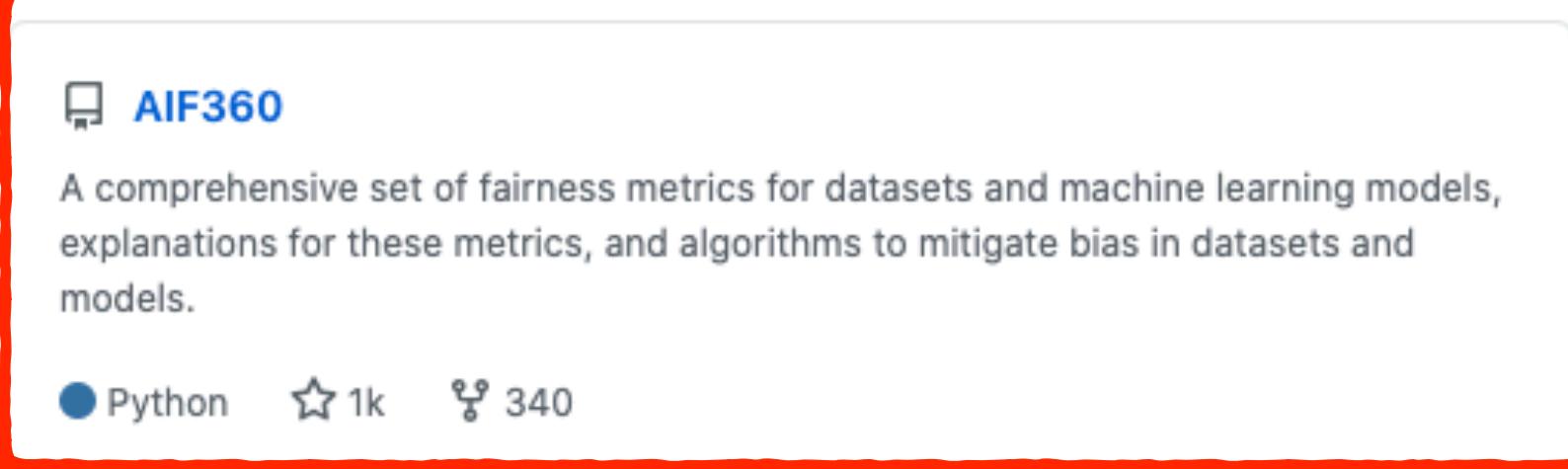
This GitHub org hosts LF AI Foundation projects in the category of Trusted and Responsible AI.

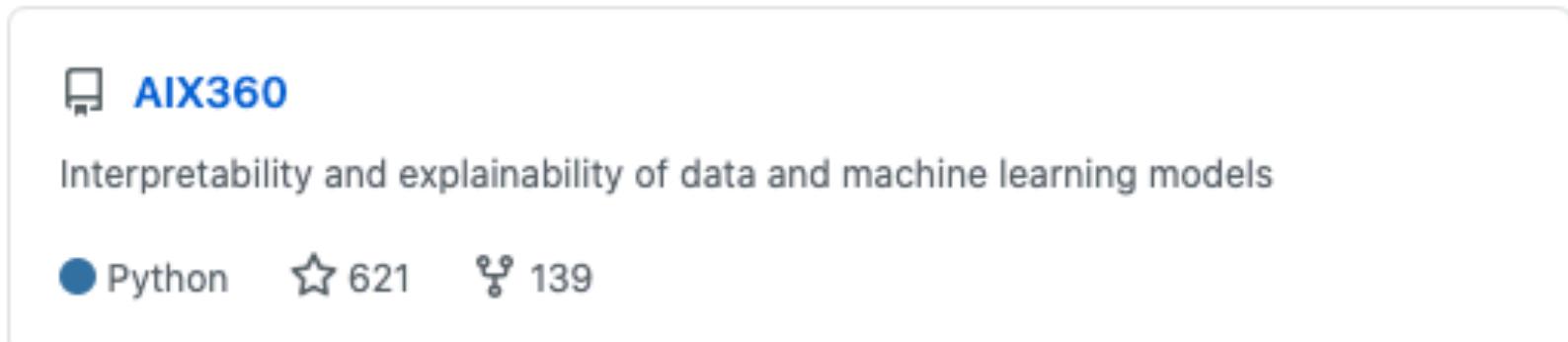
📍 IBM
🐦 @LFAI_Foundation
✉️ info@lfaifoundation.org

Repositories 4 Packages People Projects

Pinned repositories


adversarial-robustness-toolbox
Adversarial Robustness Toolbox (ART) - Python Library for Machine Learning Security - Evasion, Poisoning, Extraction, Inference
Python 1.7k 480


AIF360
A comprehensive set of fairness metrics for datasets and machine learning models, explanations for these metrics, and algorithms to mitigate bias in datasets and models.
Python 1k 340


AIX360
Interpretability and explainability of data and machine learning models
Python 621 139

Available in R too!

AI Fairness 360 (AIF360) R Package

CRAN 0.1.0
GitHub 0.1.0

Unwatch 74 Unstar 1.1k Fork 369

Trusted-AI / AIF360

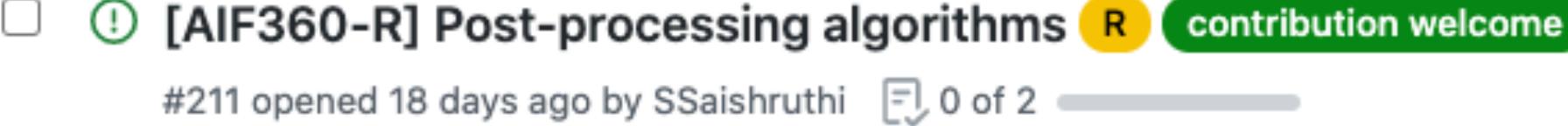
Code Issues 28 Pull requests 9 Actions Projects Wiki ...

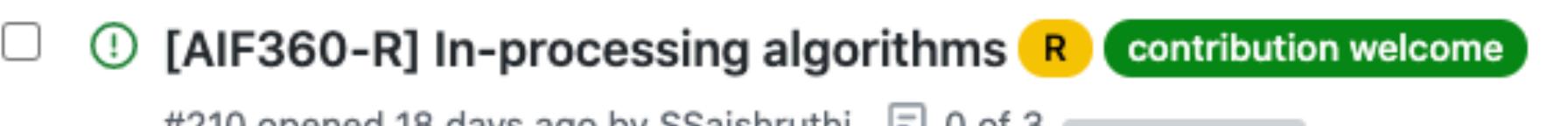
Filters is:open is:issue label:R Labels 11 Milestones 1 New issue

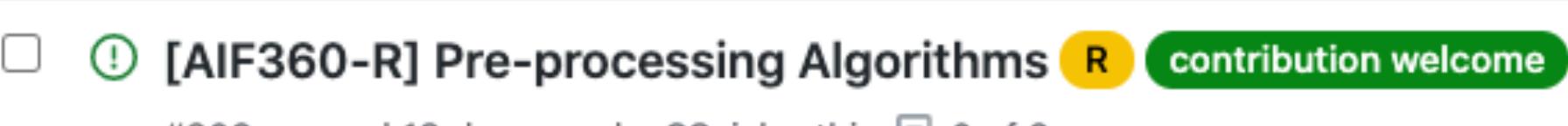
Clear current search query, filters, and sorts

7 Open 0 Closed

Author	Label	Projects	Milestones	Assignee	Sort


[AIF360-R] Post-processing algorithms R contribution welcome
#211 opened 18 days ago by SSaishruthi 0 of 2


[AIF360-R] In-processing algorithms R contribution welcome
#210 opened 18 days ago by SSaishruthi 0 of 3


[AIF360-R] Pre-processing Algorithms R contribution welcome
#209 opened 18 days ago by SSaishruthi 0 of 2


Error running install_aif360() on Windows 8.1 R
#205 opened on Sep 22 by Friesewoudloper

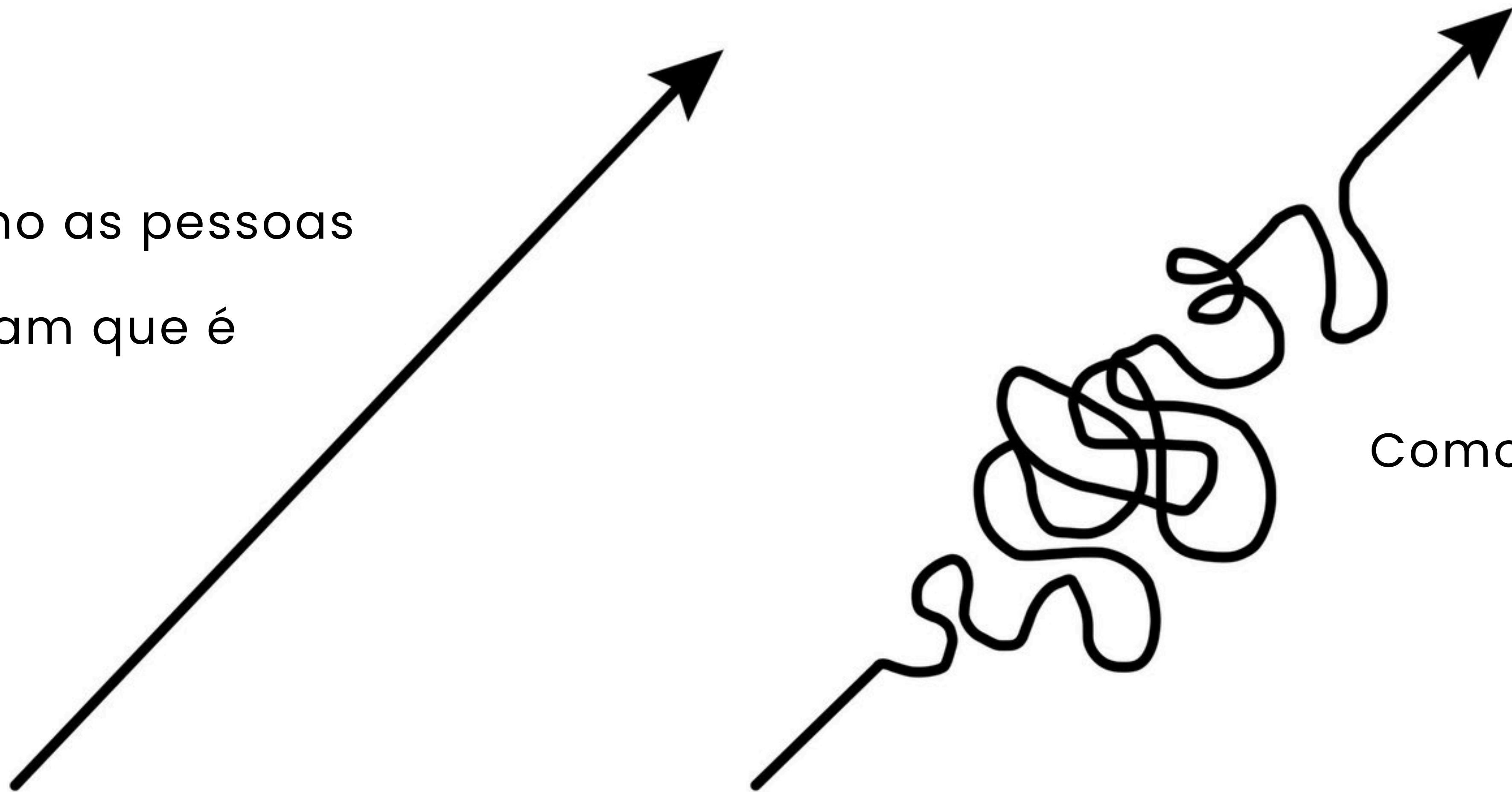

Issues in installing aif360 library on Rstudio - windows10 R
#200 opened on Sep 2 by Aloumora

Trajetória

Tudo que você fez ou faz ao longo
da sua vida importa.

Sucesso

Como as pessoas
acham que é

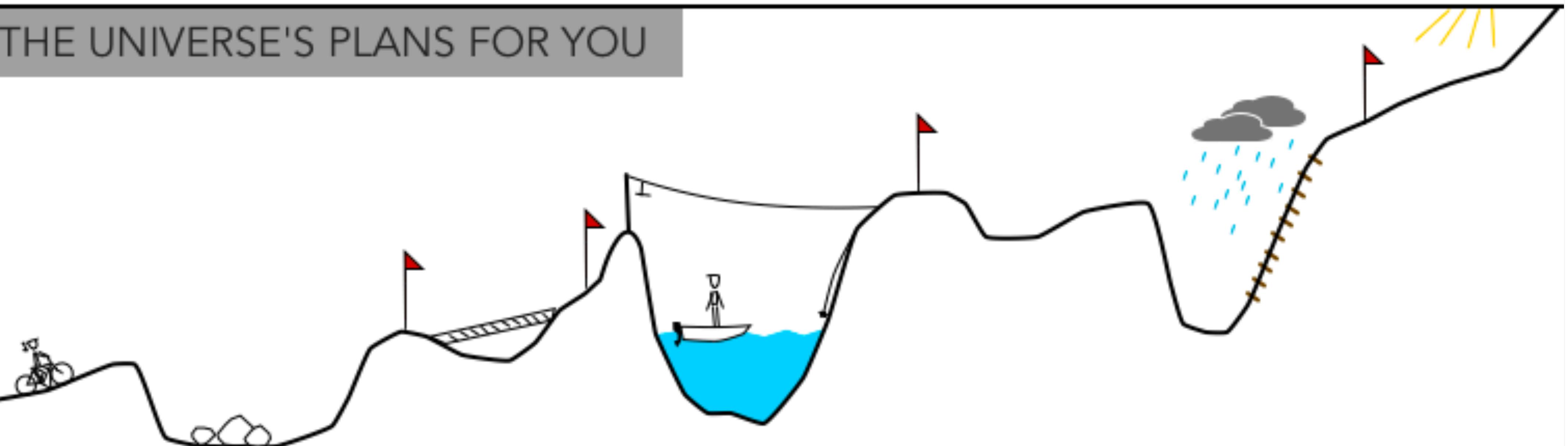


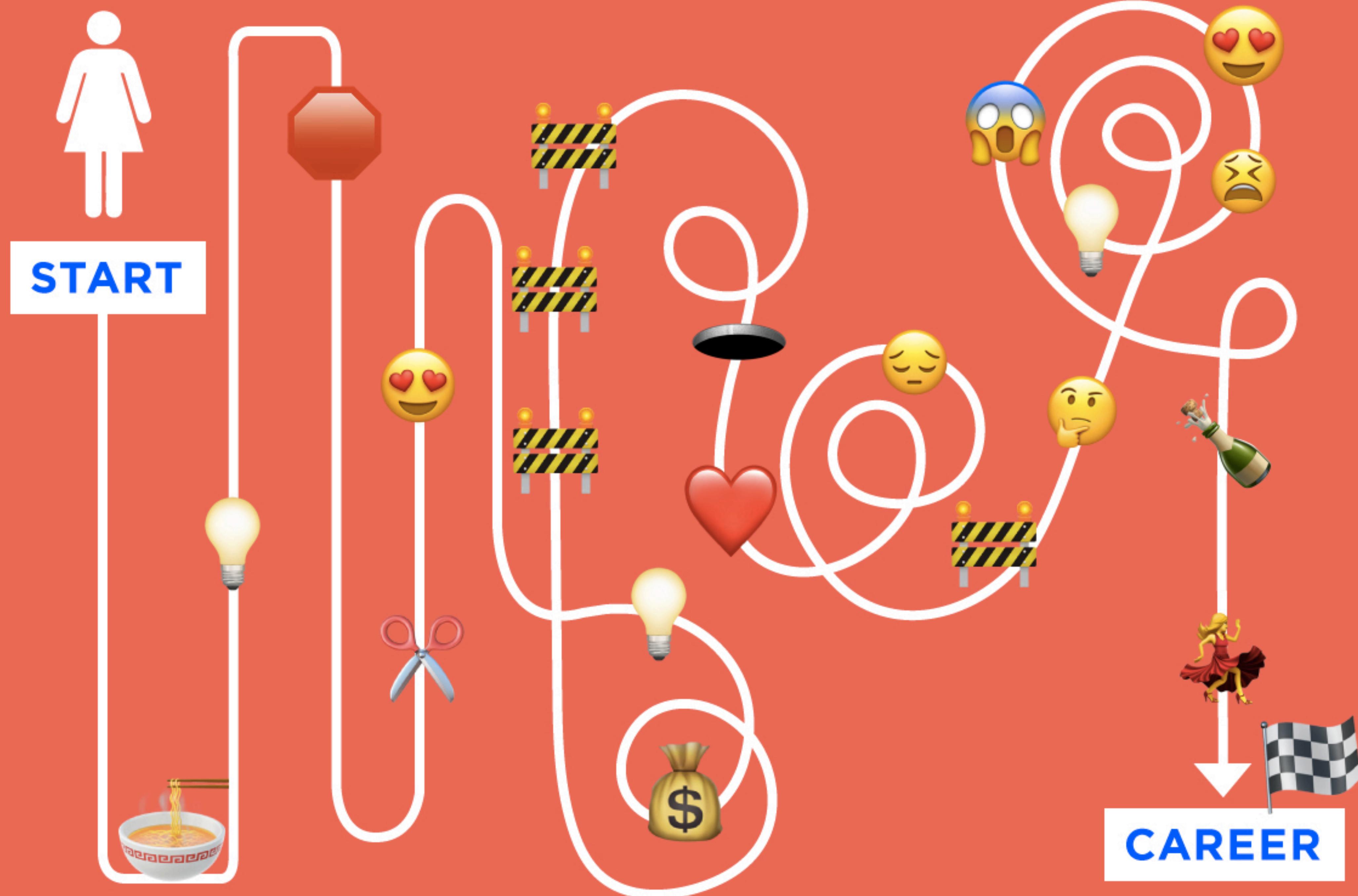
Como é na verdade

YOUR "PLANS"

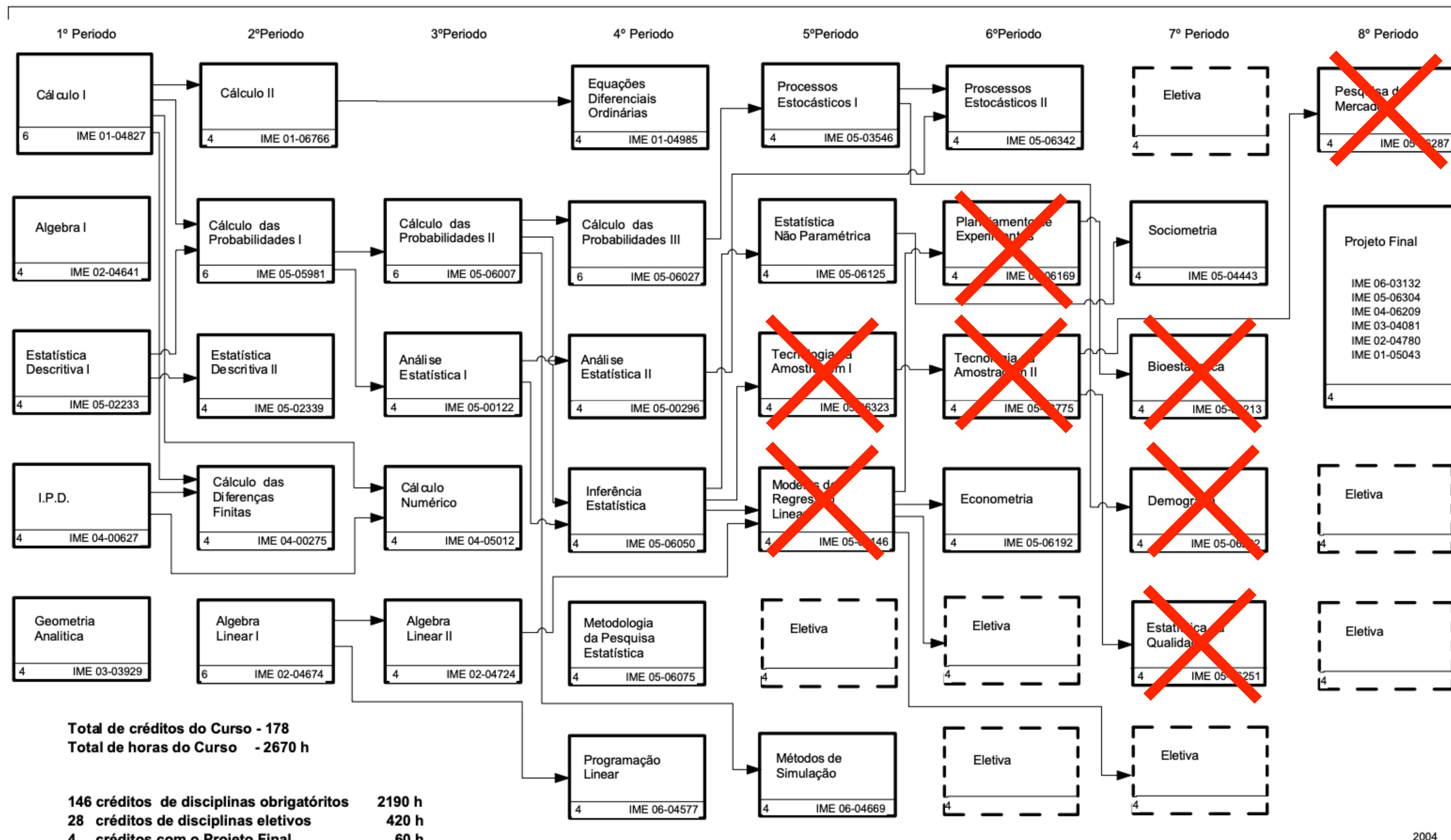


THE UNIVERSE'S PLANS FOR YOU

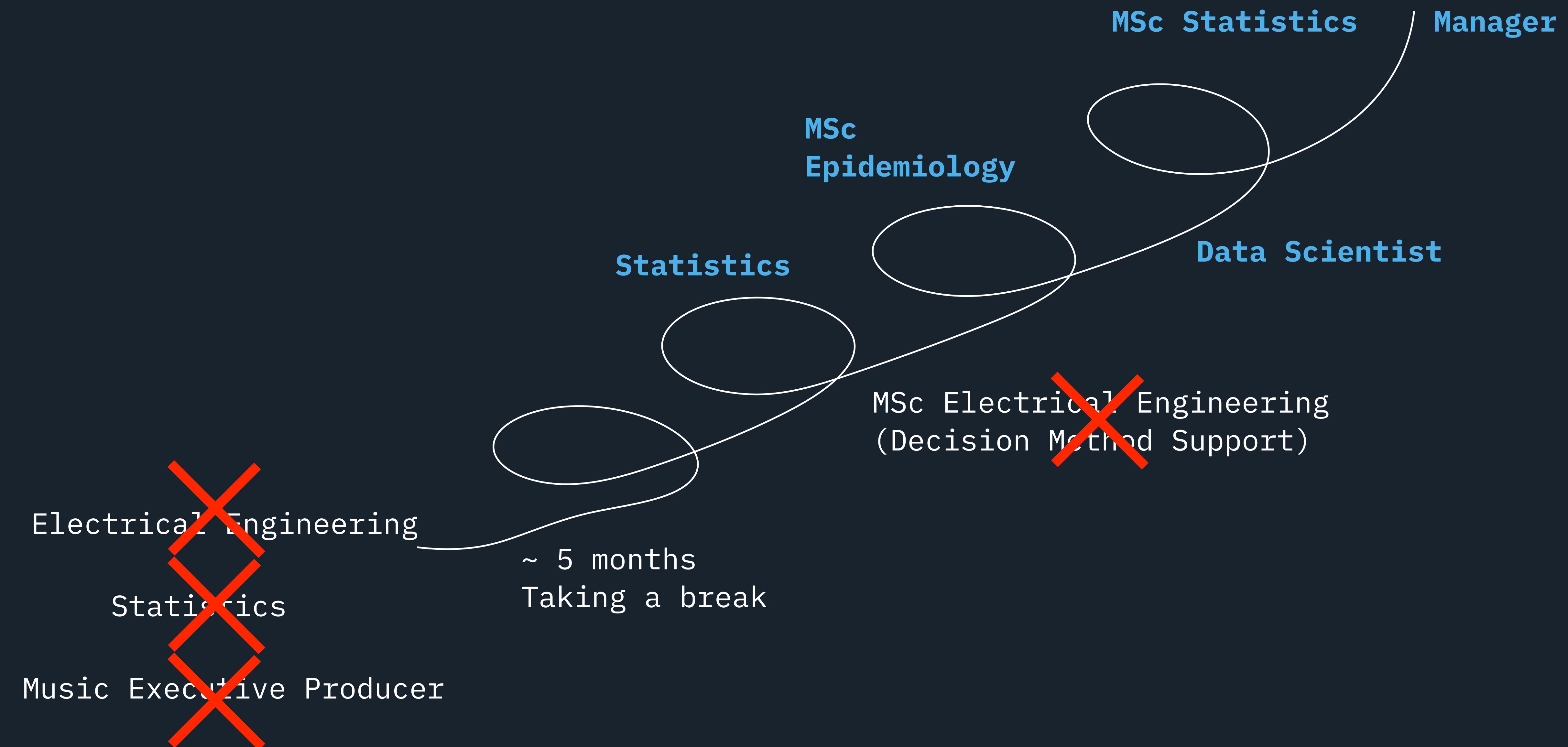




CURSO DE ESTATÍSTICA
HABILITAÇÃO: BACHARELADO
UNIDADE RESPONSÁVEL: INSTITUTO DE MATEMÁTICA E ESTATÍSTICA



Trajetória



5

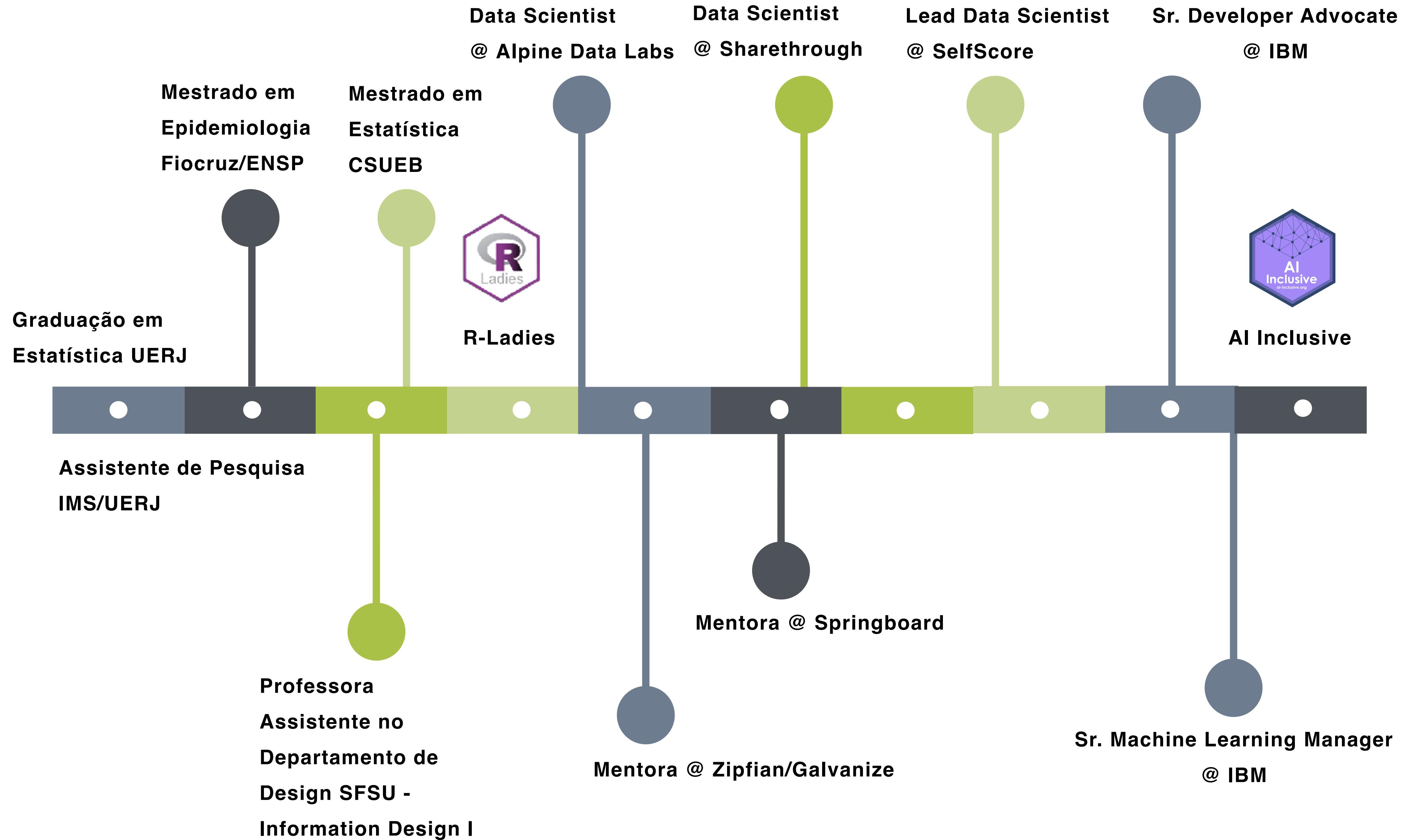
Success is not a straight line, it's much more of a dance and being open to possibilities.

O sucesso não é uma linha reta, é muito mais uma dança e estar aberto a possibilidades.

Arianna Huffington

AUTHOR, CO-FOUNDER OF THE HUFFINGTON POST, FOUNDER AND CEO OF THRIVE GLOBAL



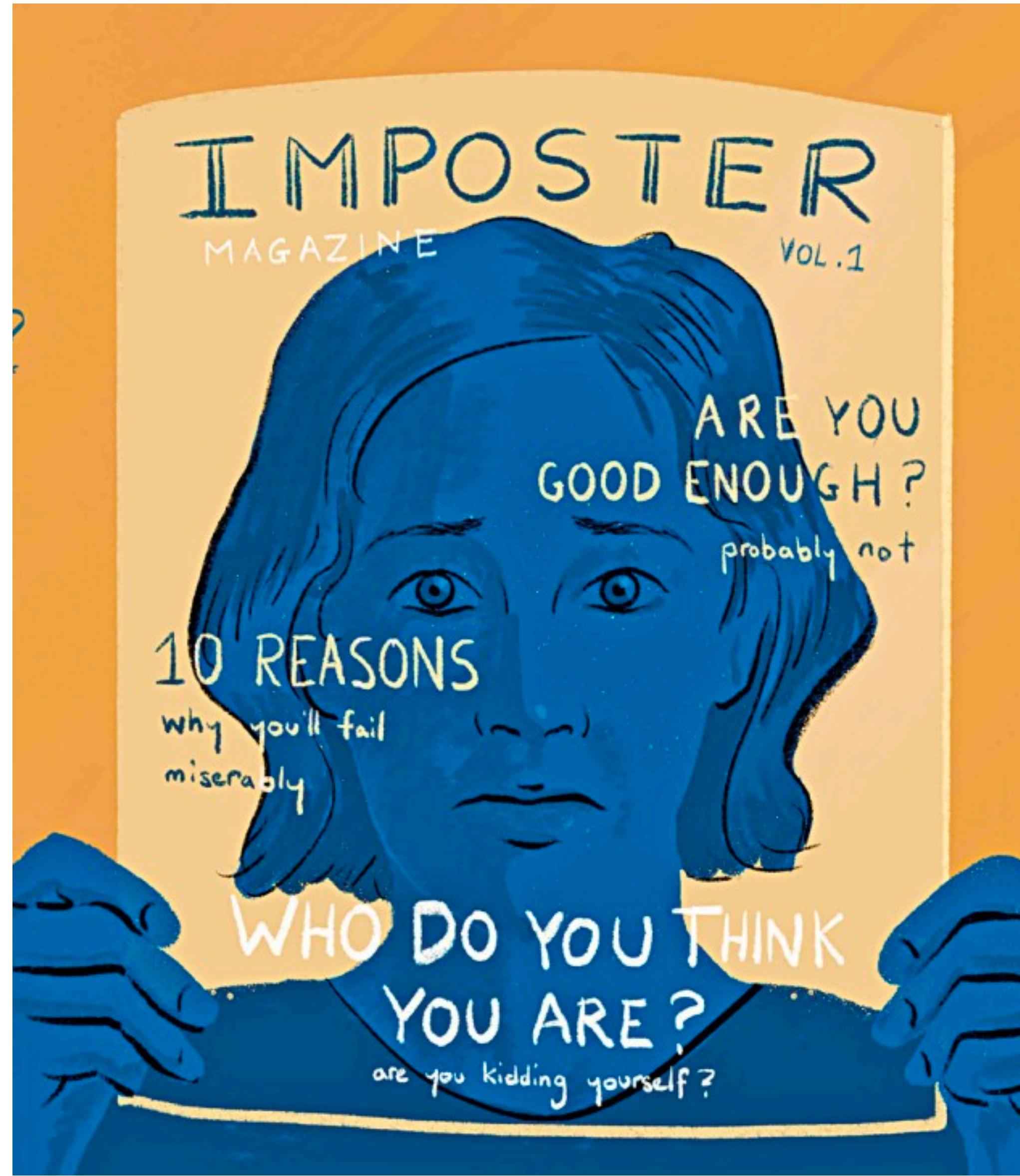


Desafios



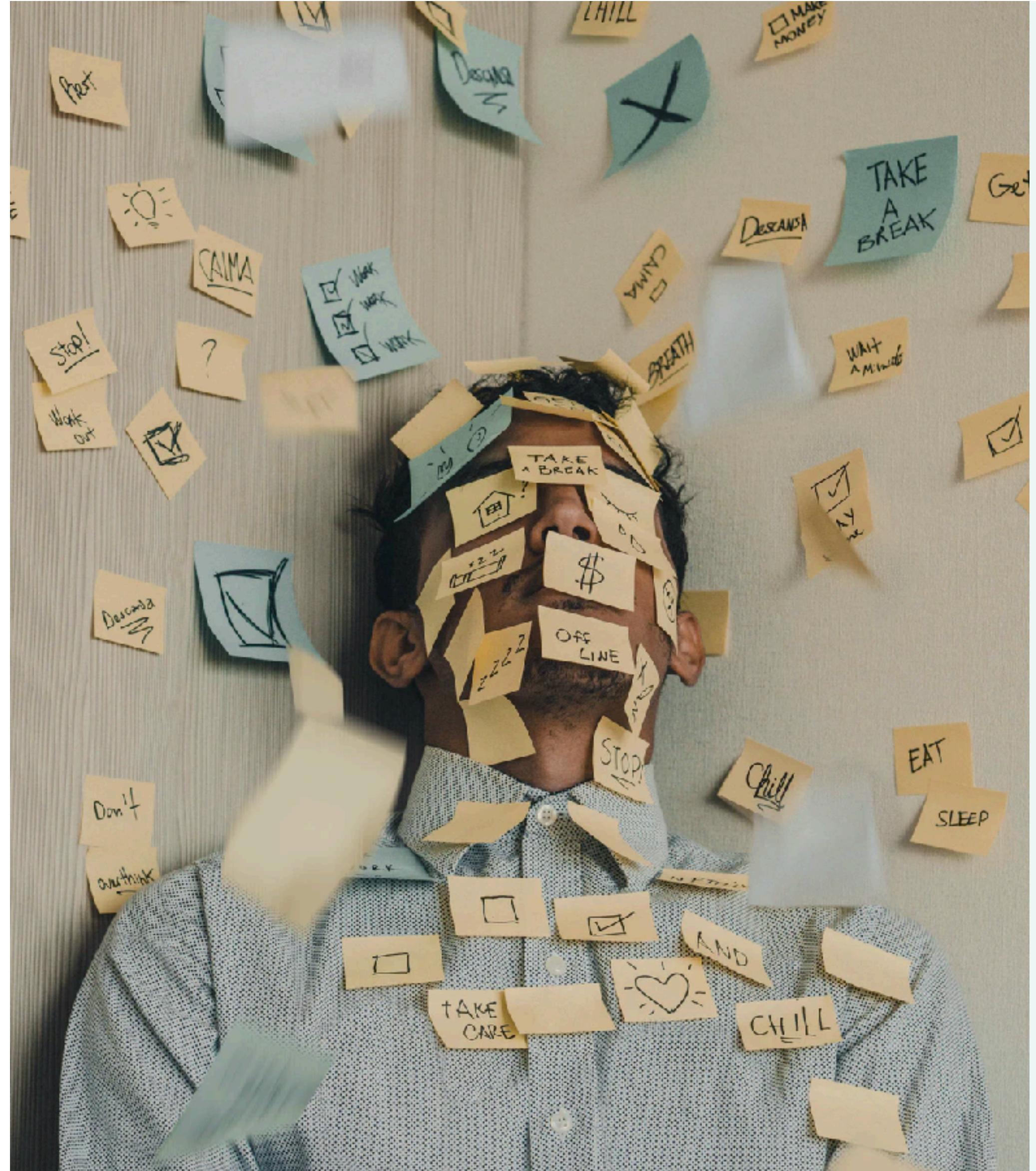
P | O | S | S | I | B | L | E

There is no failure, only feedback



Síndrome do Impostor

É muito mais comum do que imaginamos.



Muito o que aprender

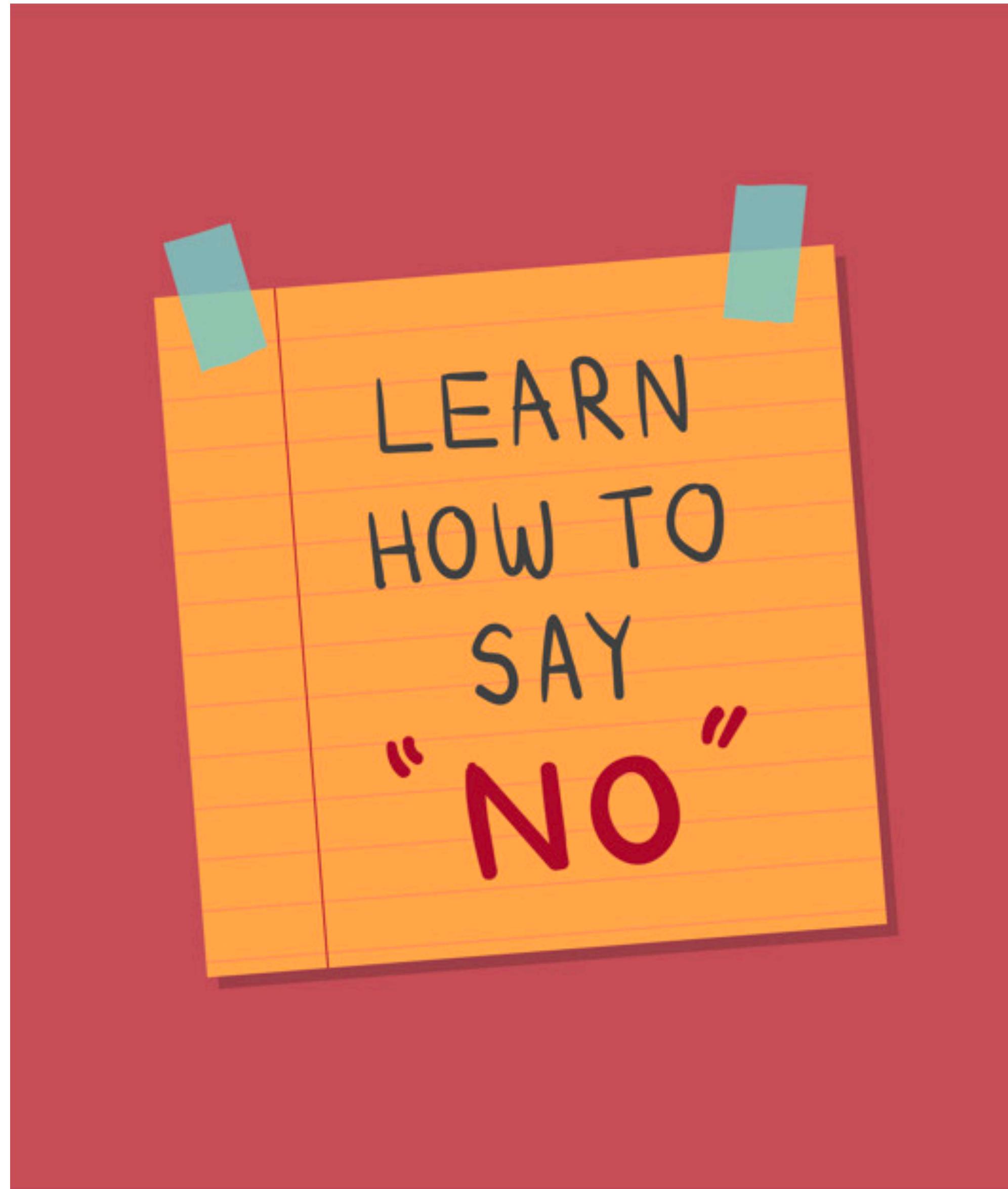
Como se manter por dentro de tudo que acontece?

THE MORE WE LEARN, THE LESS WE KNOW



Emprego

Você vai ser rejeitado, você vai receber muitos não's, vão te dizer que você não é o suficiente.



Dizer NÃO

Não significa que você vai perder oportunidade ou fechar portas, significa que você vai focar no que é importante para você e naquele momento

Dicas



No meio de tanta informação, de tanto material, de tanta novidade, por onde seguir? O que fazer?

MACHINE LEARNING



MACHINE LEARNING

ESTATÍSTICA

“Statistics is a **science**,
not a branch of mathematics,
but uses mathematical models
as essential tools.”

—John Tukey

A dark-themed screenshot of a computer screen showing a large amount of white and red code text, likely PHP, displayed in a terminal or code editor window.

PROGRAMAÇÃO

Comunicar



Flexibilidade



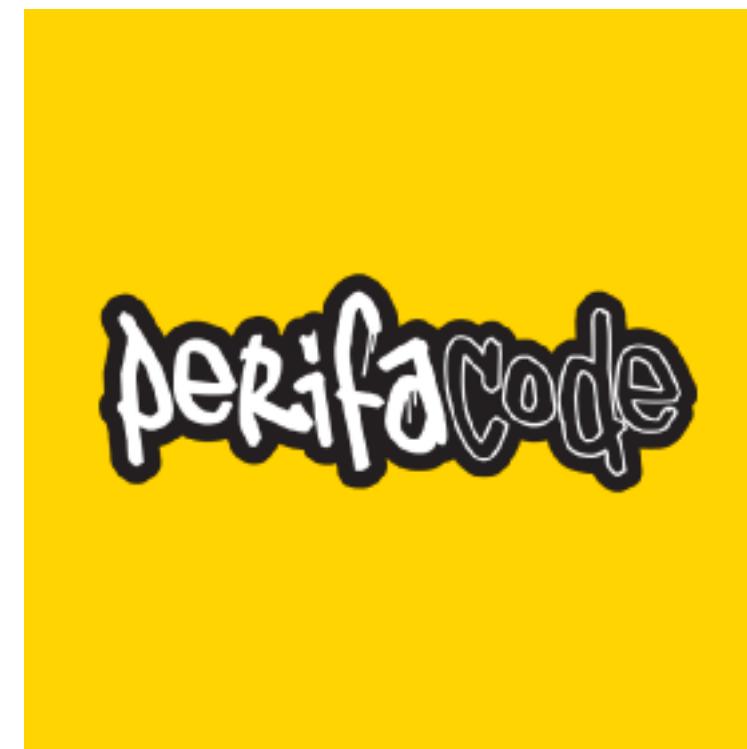
Curiosidade



Pensamento Crítico



Faça parte de grupos, comunidades e organizações



AFRØPYTHON

pyladies

AI Girls

girls
support
girls

pro
gra
{m}a
ria

MINAS
PROGRAMAM



MENINAS
DIGITAIS

Mentores, Role Models, Sponsors, Advocates

DIVERSITY





Seja quem você é

Siga a gente:

bit.ly/ai-inclusive-instagram



Materiais de Inteligência Artificial,
Ciência de Dados, Machine Learning
Eventos, Ingressos de graça e muito
mais!

Em breve:

Bolsas de estudo para cursos de R,
Python, Ciência de Dados, SQL, e
outros.



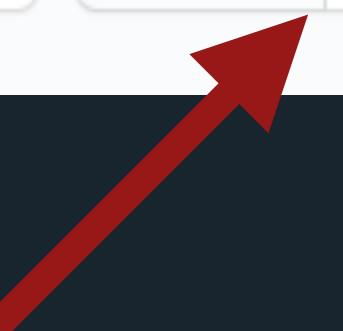
Obrigada!

slides e material: bit.ly/csbc-wit

 CODAIT / presentations

 Watch 28  Star 30  Fork 15

Salve o nosso repositório com estrela

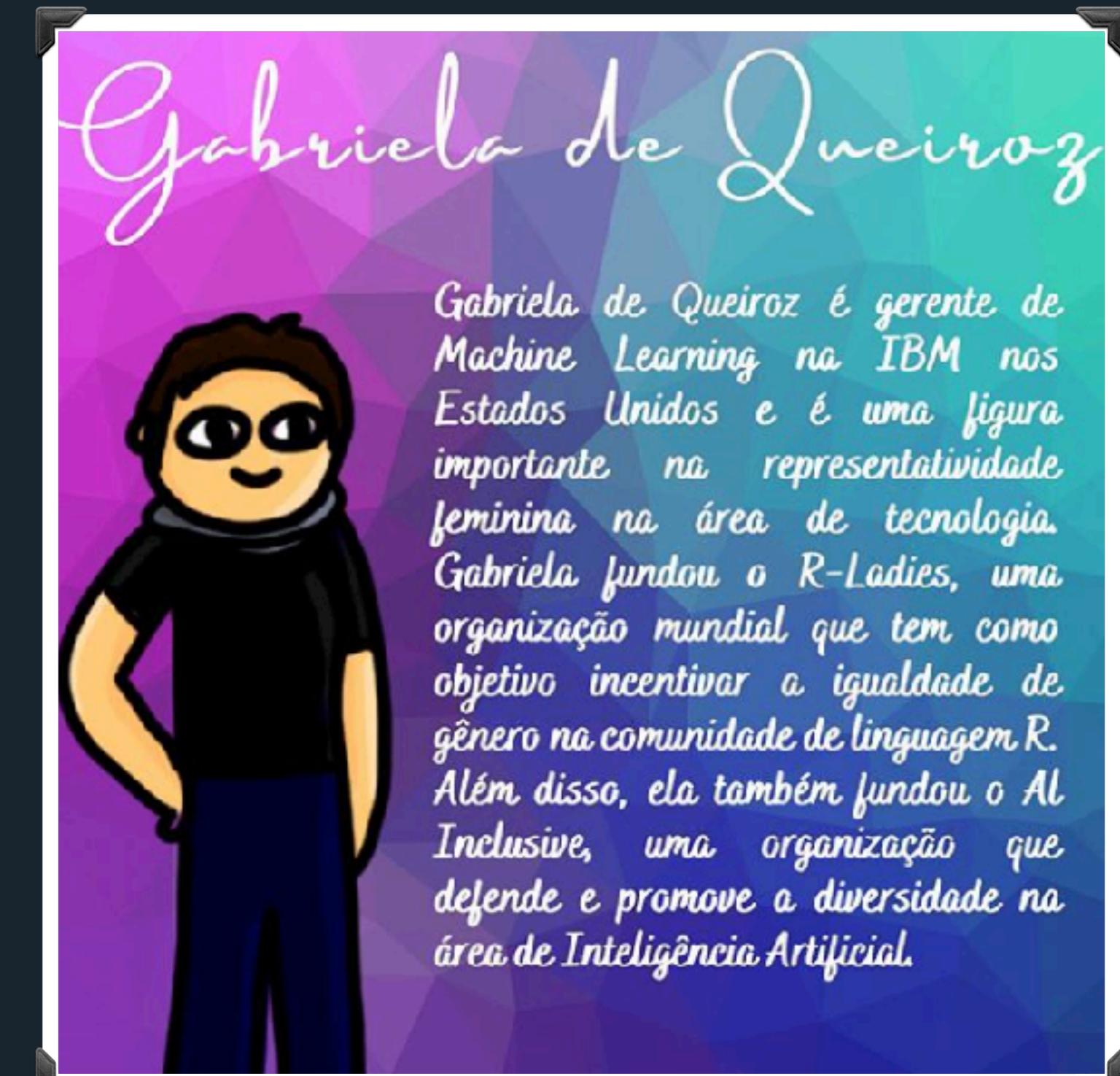


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@gdequeiroz | linktr.ee/gdq

Obrigada @ Manas Digitais



Obrigada!

slides e material: bit.ly/csbc-wit



Salve o nosso repositório com estrela



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