





¿Qué puede hacer la inteligencia artificial en favor de la igualdad?

Nerea Luis @sailormerqury



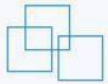
Nerea Luis

@sailormerqury

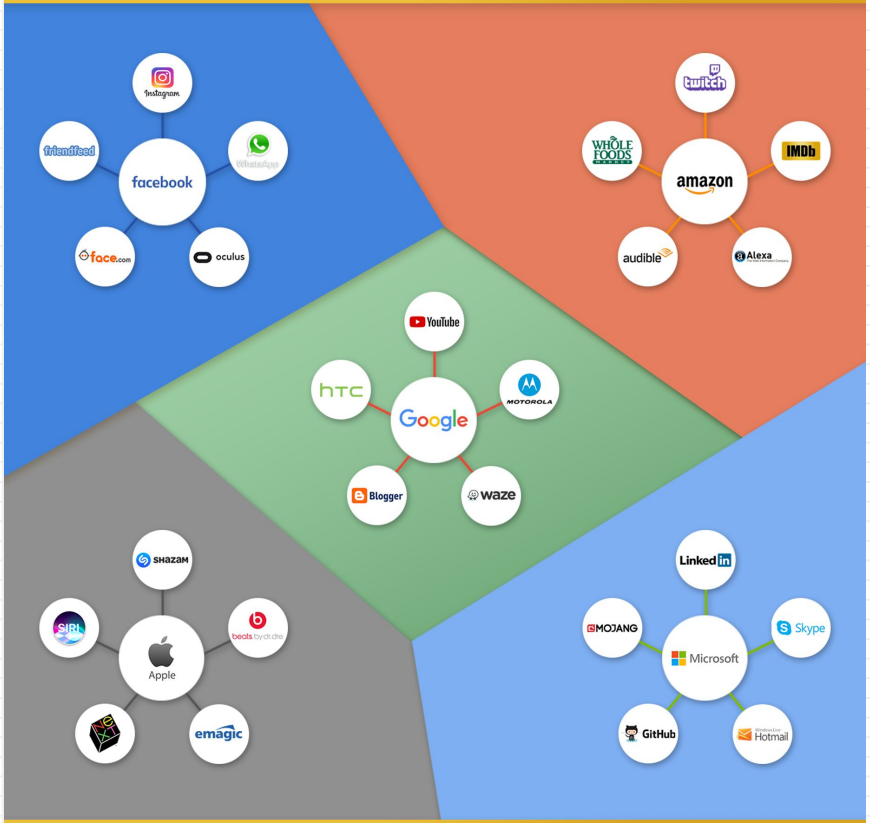
- AI Engineer Sngular
- Cofundadora de T3chFest
- Doctora en Inteligencia artificial
- Divulgación tecnológica

Analizando el trabajo y los nuevos perfiles del “futuro”

Didn't Exist in 2006

- IPHONE 
- IPAD 
- KINDLE 
- 4G 
- LYFT 
- ANDROID 
- WHATSAPP 
- AIRBNB 
- OCULUS 
- SPOTIFY 
- NEST 
- BITCOIN 
- BLOCKCHAIN 
- SQUARE $
- INSTAGRAM 
- SNAPCHAT 

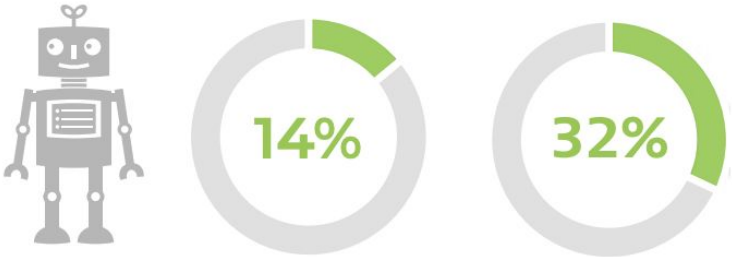
The Big Five Tech Companies
& Their Big Five Acquisitions



made with ♥ by GrowthRocks

Risk of automation is real but varies across countries

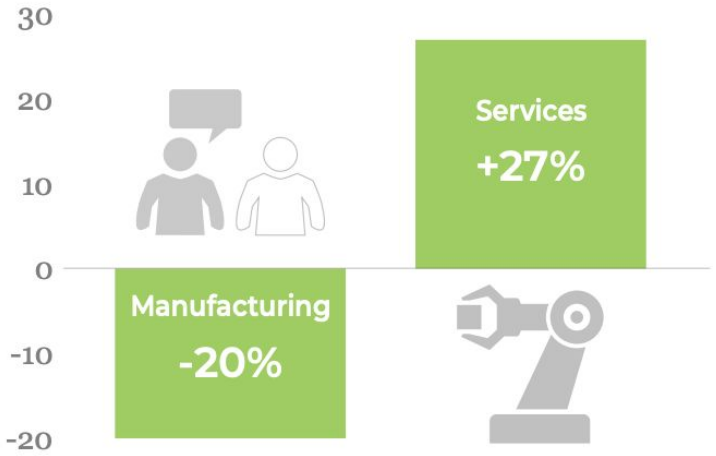
14% of jobs could be automated, with 32% likely to change significantly.



Will this lead to fewer jobs for humans? Unlikely.
While technological progress makes some occupations obsolete, it also creates new jobs.

The labour market is transforming

% change in number of jobs between 1995 and 2015



Between 1995 and 2015 employment in the manufacturing sector went down by 20%, while **it rose by 27% in the service sector**

Many adults do not have the right skills for emerging jobs



6 out of 10 adults lack basic ICT skills or have no computer experience.

But the **share of highly-skilled jobs has increased by 25%** over last 2 decades. Low-skilled jobs have also increased, but the share of middle-skilled jobs has decreased.

Social protection needs to be adapted to the future of work

Self-employment, part-time and temporary work are on the rise in some countries.

Together, such non-standard workers are **50% less likely to be unionised** than standard employees



In some countries they are also 40-50% less likely to get income support when out of work.



Policies can help

Better social protection coverage for workers in non-standard jobs.

Adult training should better target the disadvantaged, such as the low-skilled.



Ensure all workers have adequate labour market protections.



Extend collective bargaining coverage to previously excluded workers.



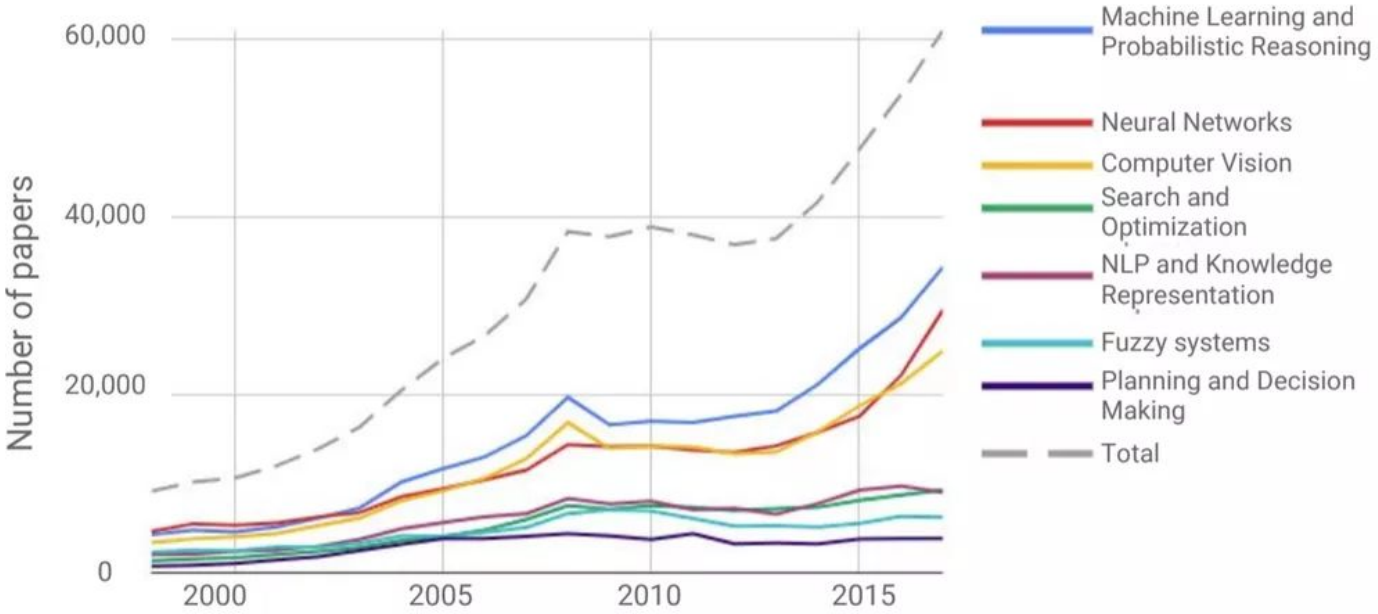
Source: OECD Employment Outlook 2019: The Future of Work.

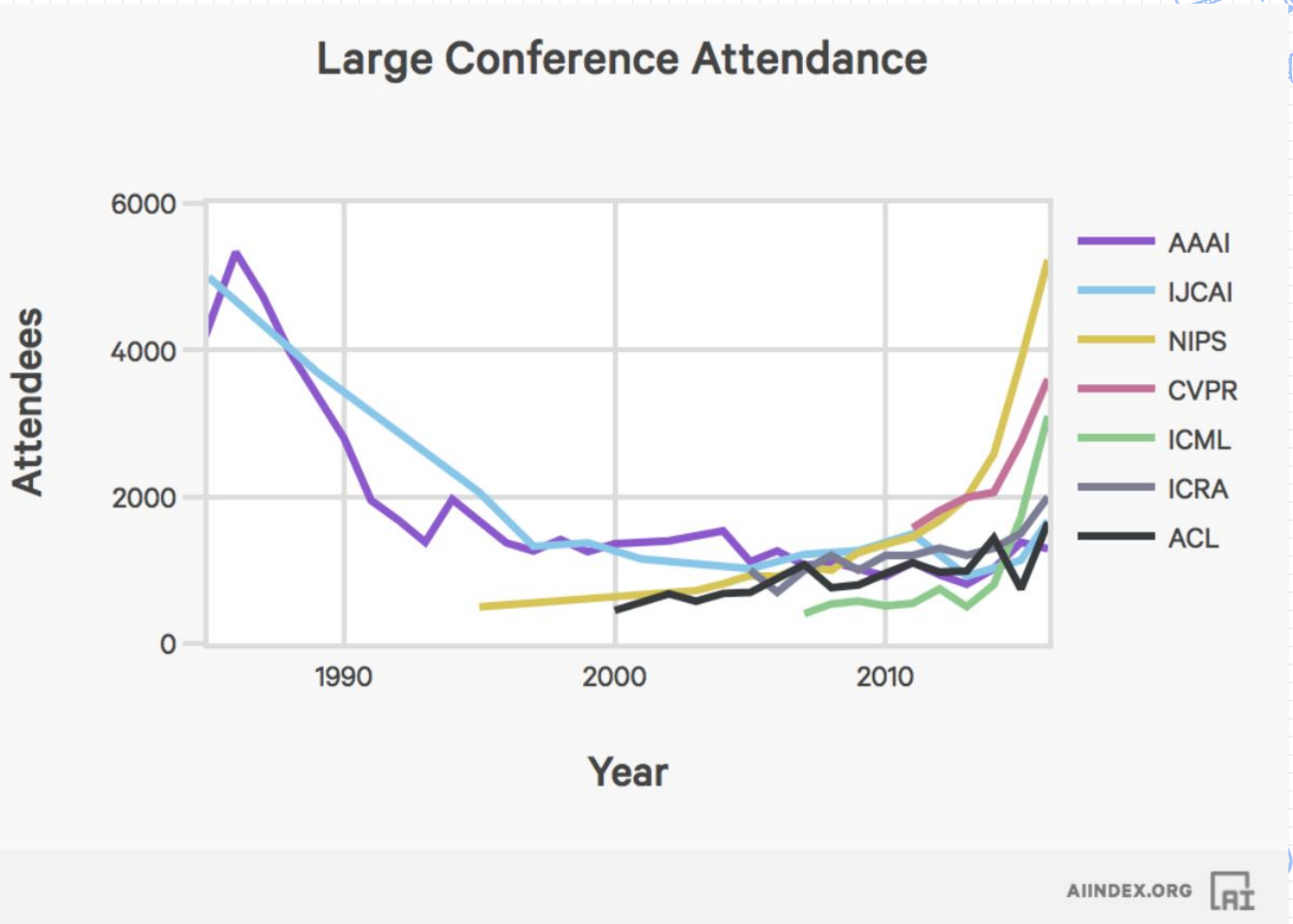
Mi empleo mi futuro



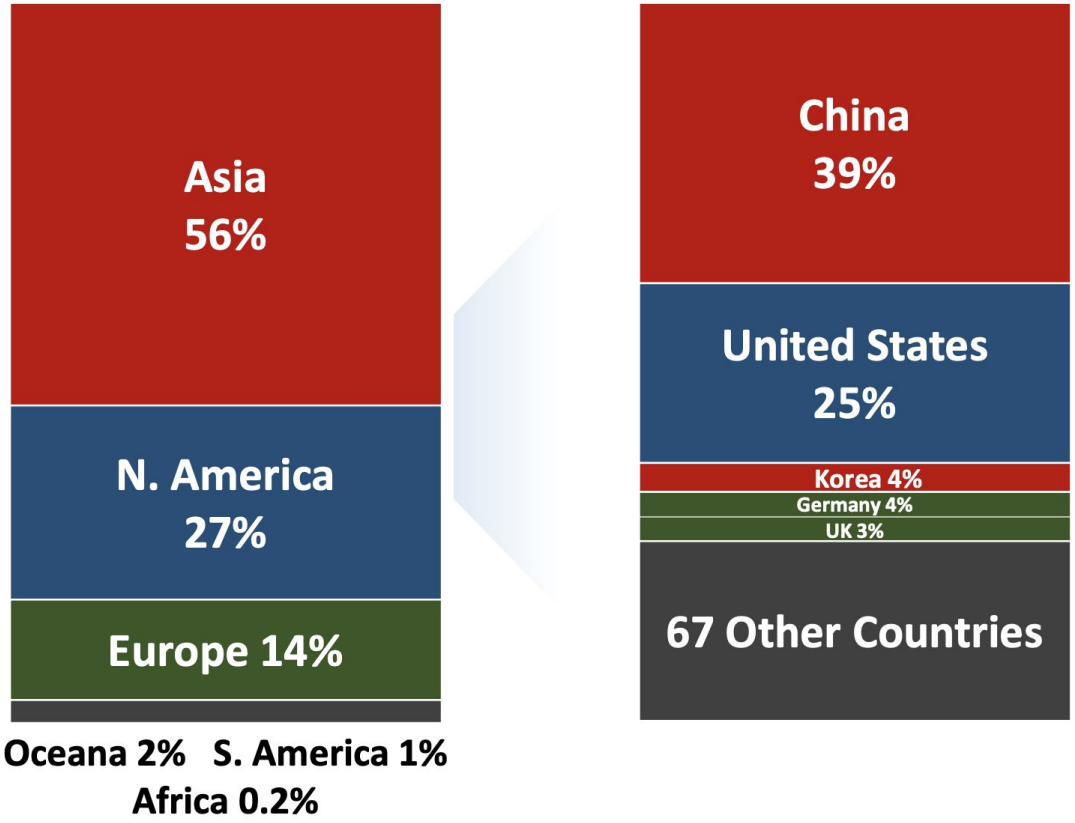
¿Qué sucede en Inteligencia Artificial?

Number of AI papers on Scopus by subcategory (1998-2017)
Source: Elsevier

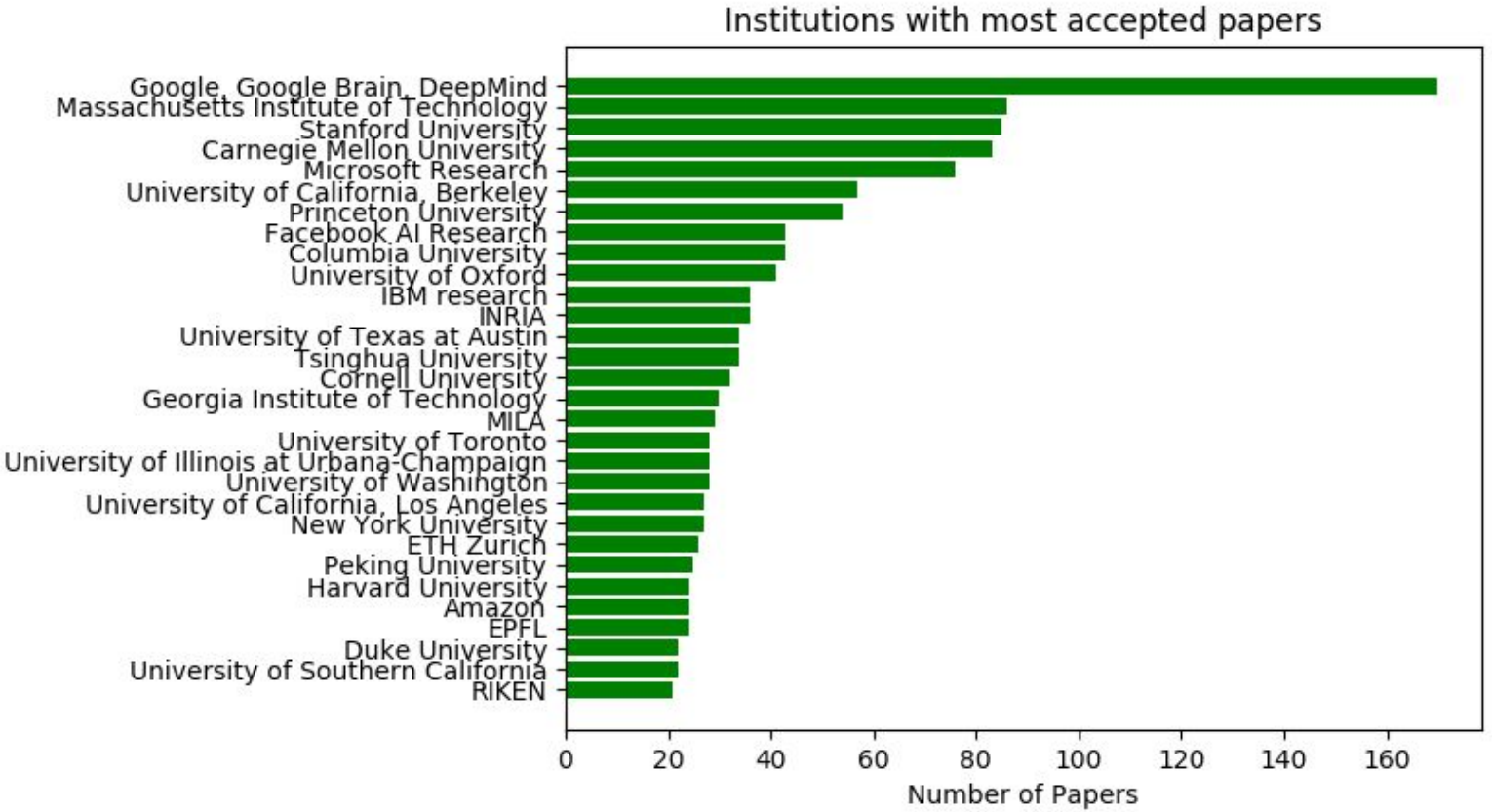



Large Conference Attendance
Attendees
6000
4000
2000
0
1990
2000
2010
Year
AAAI
IJCAI
NIPS
CVPR
ICML
ICRA
ACL
AIINDEX.ORG

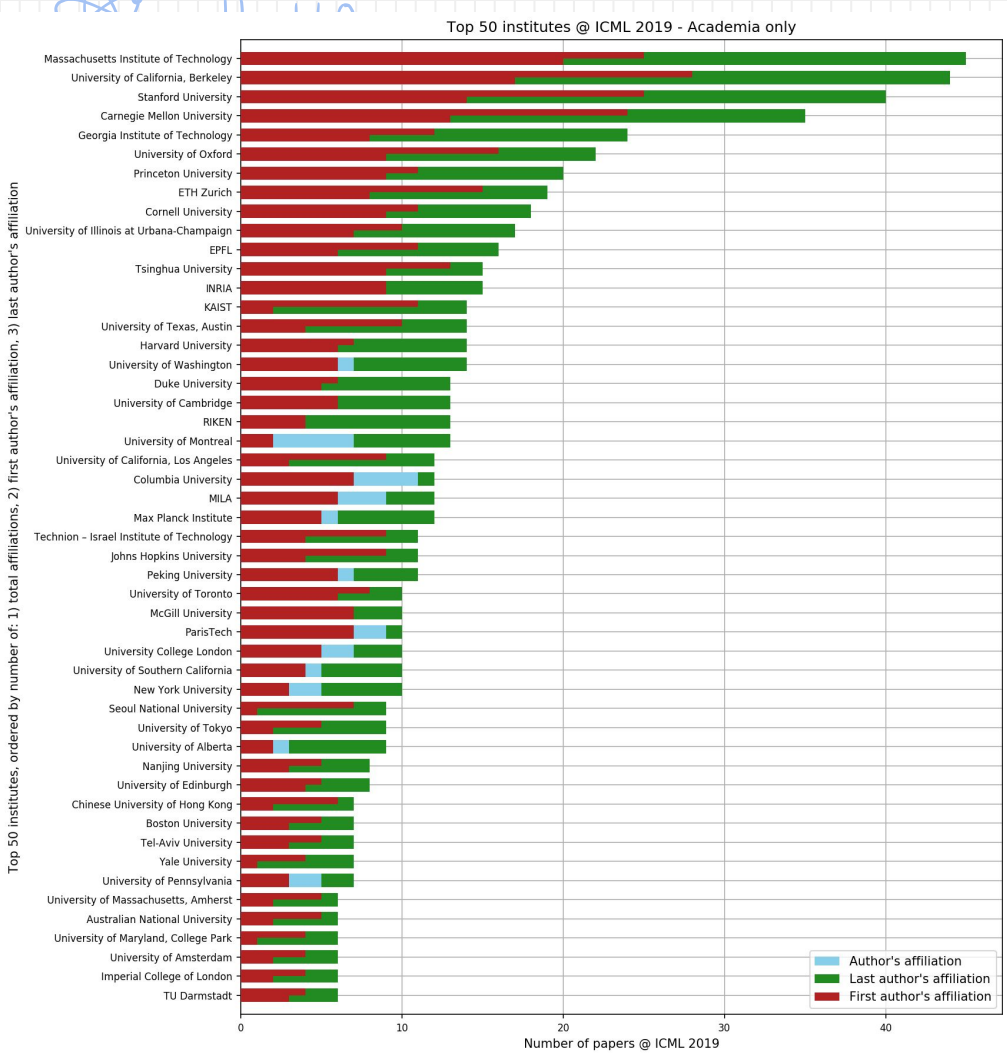
14,104 authors submitted 5,160 papers

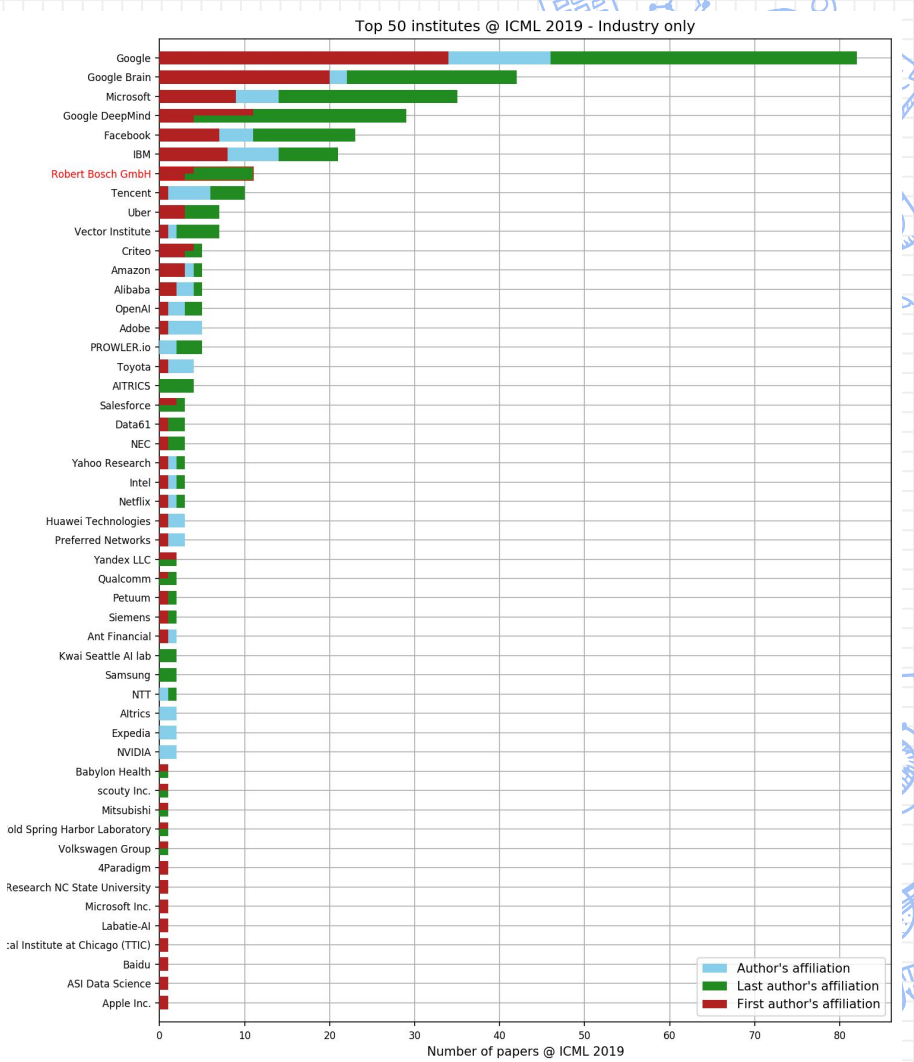


CVPR


Institutions with most accepted papers
Google, Google Brain, DeepMind
Massachusetts Institute of Technology
Stanford University
Carnegie Mellon University
Microsoft Research
University of California, Berkeley
Princeton University
Facebook AI Research
Columbia University
University of Oxford
IBM research
INRIA
University of Texas at Austin
Tsinghua University
Cornell University
Georgia Institute of Technology
MILA
University of Toronto
University of Illinois at Urbana-Champaign
University of Washington
University of California, Los Angeles
New York University
ETH Zurich
Peking University
Harvard University
Amazon
EPFL
Duke University
University of Southern California
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160
Number of Papers

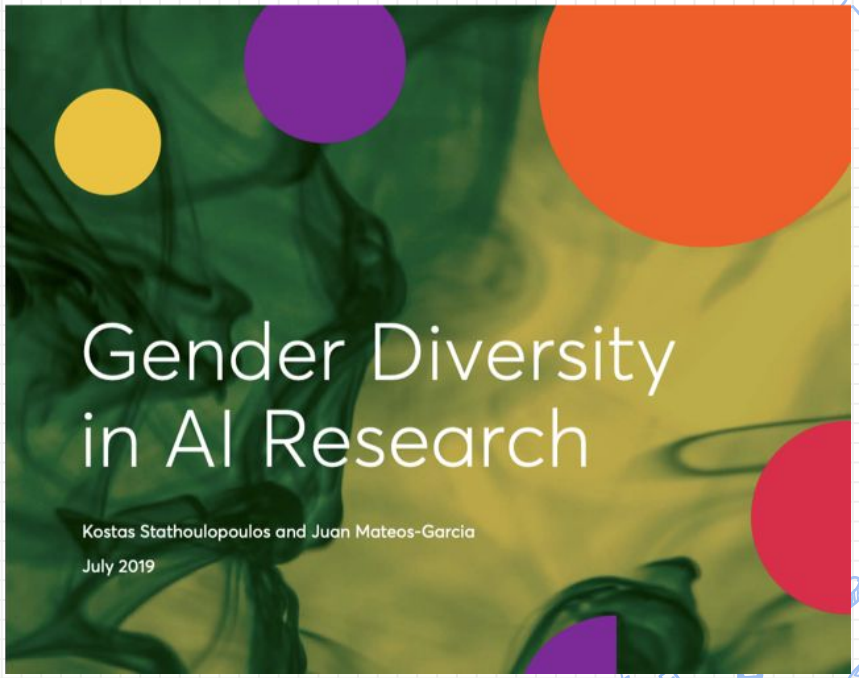
NEURIPS


Top 50 institutes @ ICML 2019 - Academia only
Massachusetts Institute of Technology
University of California, Berkeley
Stanford University
Carnegie Mellon University
Georgia Institute of Technology
University of Oxford
Princeton University
ETH Zurich
Cornell University
University of Illinois at Urbana-Champaign
EPFL
Tsinghua University
INRIA
KAIST
University of Texas, Austin
Harvard University
University of Washington
Duke University
University of Cambridge
RIKEN
University of Montreal
University of California, Los Angeles
Columbia University
MILA
Max Planck Institute
Technion – Israel Institute of Technology
Johns Hopkins University
Peking University
University of Toronto
McGill University
ParisTech
University College London
University of Southern California
New York University
Seoul National University
University of Tokyo
University of Alberta
Nanjing University
University of Edinburgh
Chinese University of Hong Kong
Boston University
Tel-Aviv University
Yale University
University of Pennsylvania
University of Massachusetts, Amherst
Australian National University
University of Maryland, College Park
University of Amsterdam
Imperial College of London
TU Darmstadt
Top 50 institutes, ordered by number of: 1) total affiliations, 2) first author's affiliation, 3) last author's affiliation
0
10
20
30
40
Number of papers @ ICML 2019
Author's affiliation
Last author's affiliation
First author's affiliation


Top 50 institutes @ ICML 2019 - Industry only
Google
Google Brain
Microsoft
Google DeepMind
Facebook
IBM
Robert Bosch GmbH
Tencent
Uber
Vector Institute
Criteo
Amazon
Alibaba
OpenAI
Adobe
PROWLER.io
Toyota
AITRICS
Salesforce
Data61
NEC
Yahoo Research
Intel
Netflix
Huawei Technologies
Preferred Networks
Yandex LLC
Qualcomm
Petuum
Siemens
Ant Financial
Kwai Seattle AI lab
Samsung
NTT
Altrics
Expedia
NVIDIA
Babylon Health
scouty Inc.
Mitsubishi
old Spring Harbor Laboratory
Volkswagen Group
4Paradigm
Research NC State University
Microsoft Inc.
Labatie-AI
al Institute at Chicago (TTIC)
Baidu
ASI Data Science
Apple Inc.
0
10
20
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80
Number of papers @ ICML 2019
Author's affiliation
Last author's affiliation
First author's affiliation

Brecha digital y de género en IA

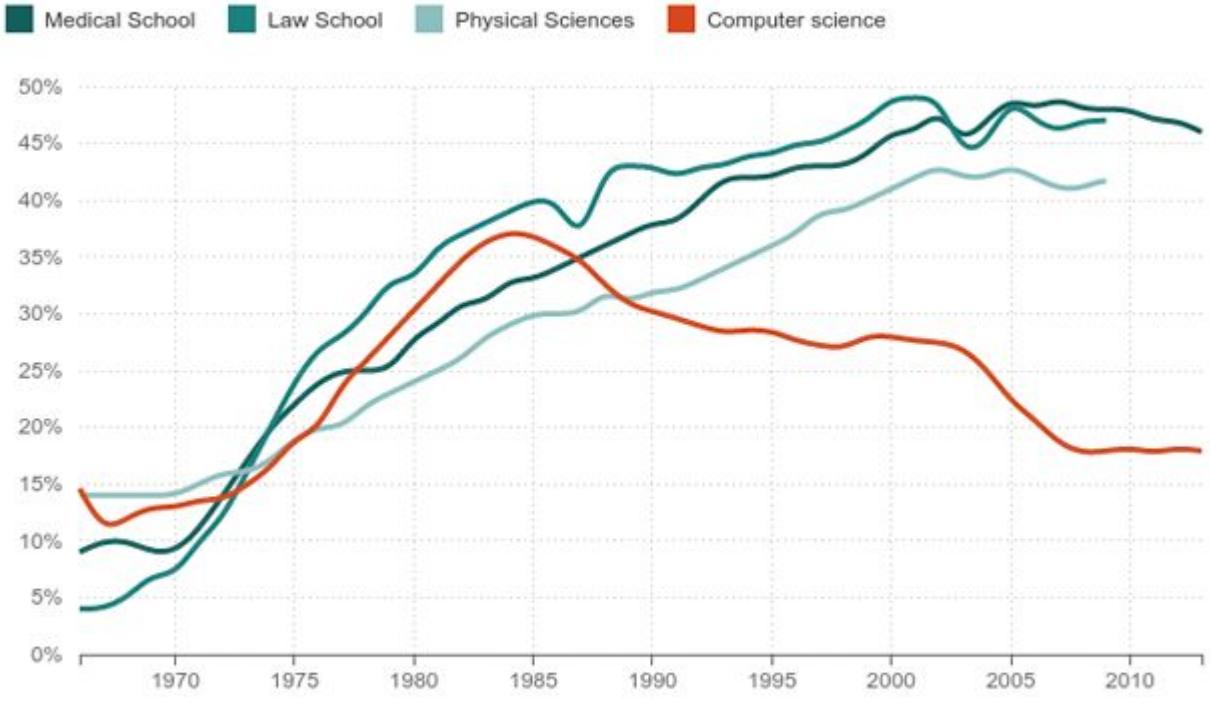
- There is a serious gender diversity crisis in AI research Only 13.83% of authors are women. It has not improved since the 1990s.
- Location and research domain are significant drivers of gender diversity
- There is a significant gender diversity gap in universities, big tech companies and other research institutions less than 25% female AI researchers.
- There are important semantic differences between AI papers with and without a female co-author. Papers with at least one female co-author also tend to be more applied and socially aware



https://www.nesta.org.uk/report/gender-diversity-ai/

What Happened To Women In Computer Science?

% Of Women Majors, By Field

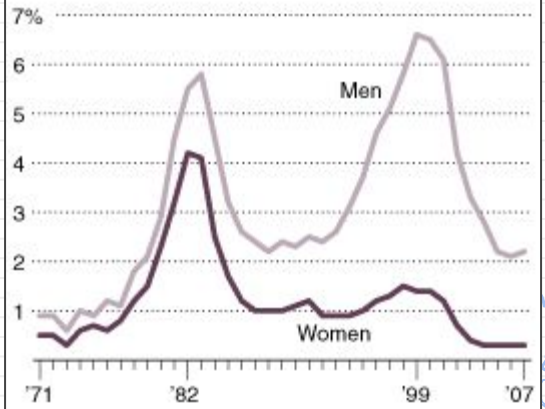


Source: National Science Foundation, American Bar Association, American Association of Medical Colleges

Credit: Quoctrung Bui/NPR

Widening Gap

The percentage of female college freshmen who list computer science as a probable major is 0.3 percent, down from 4.2 percent in 1982.



Source: U.C.L.A. Higher Education Research Institute

THE NEW YORK TIMES

Kindergarten to 12th grade

Middle and high school students interested in computer science, % girls



47

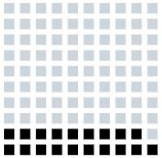
Students taking Advanced Placement classes in computer science, % girls



23

Higher education

Students who receive degrees in computing, % women



19

Women in the computing workforce

Computing workforce, % women



26

Computing workforce, % black women



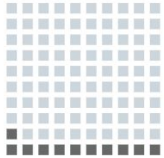
3

Computing workforce, % Latina women

1

Tech companies

Senior leadership in tech companies, % women



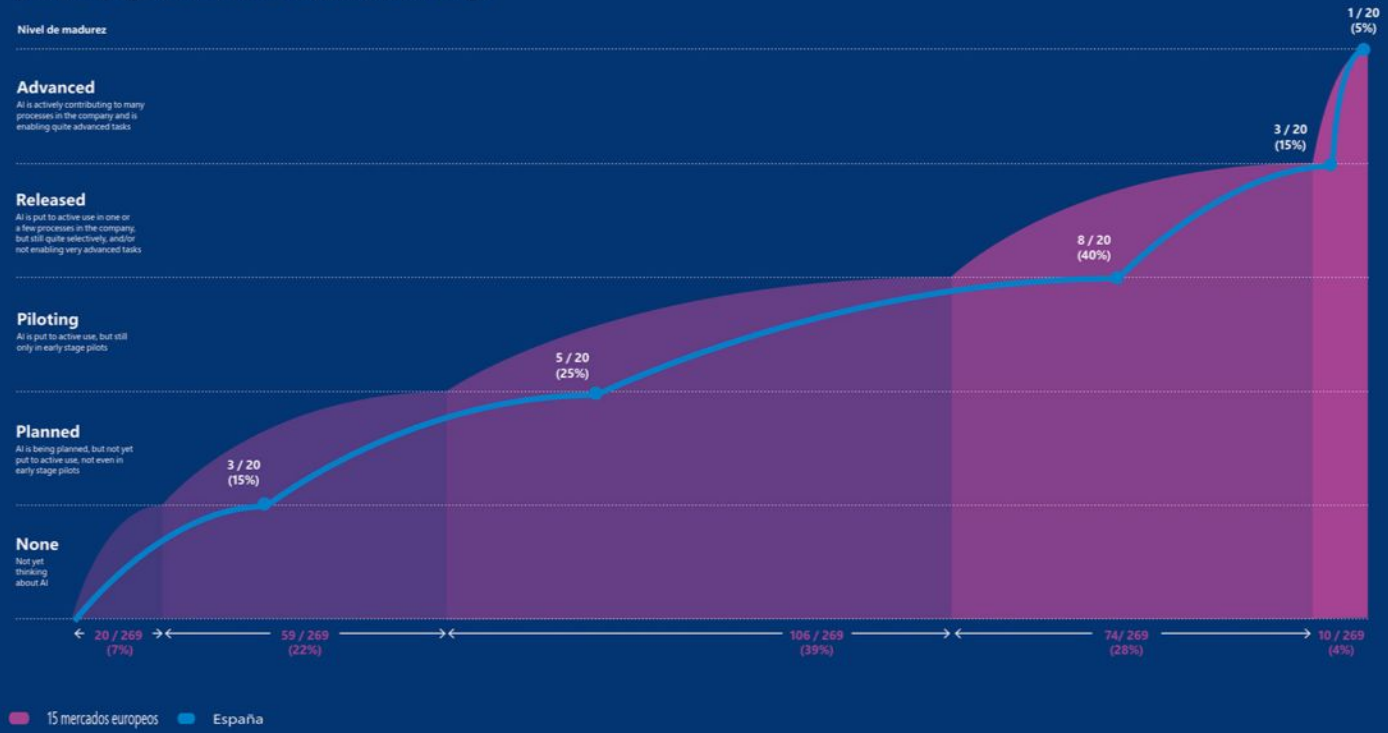
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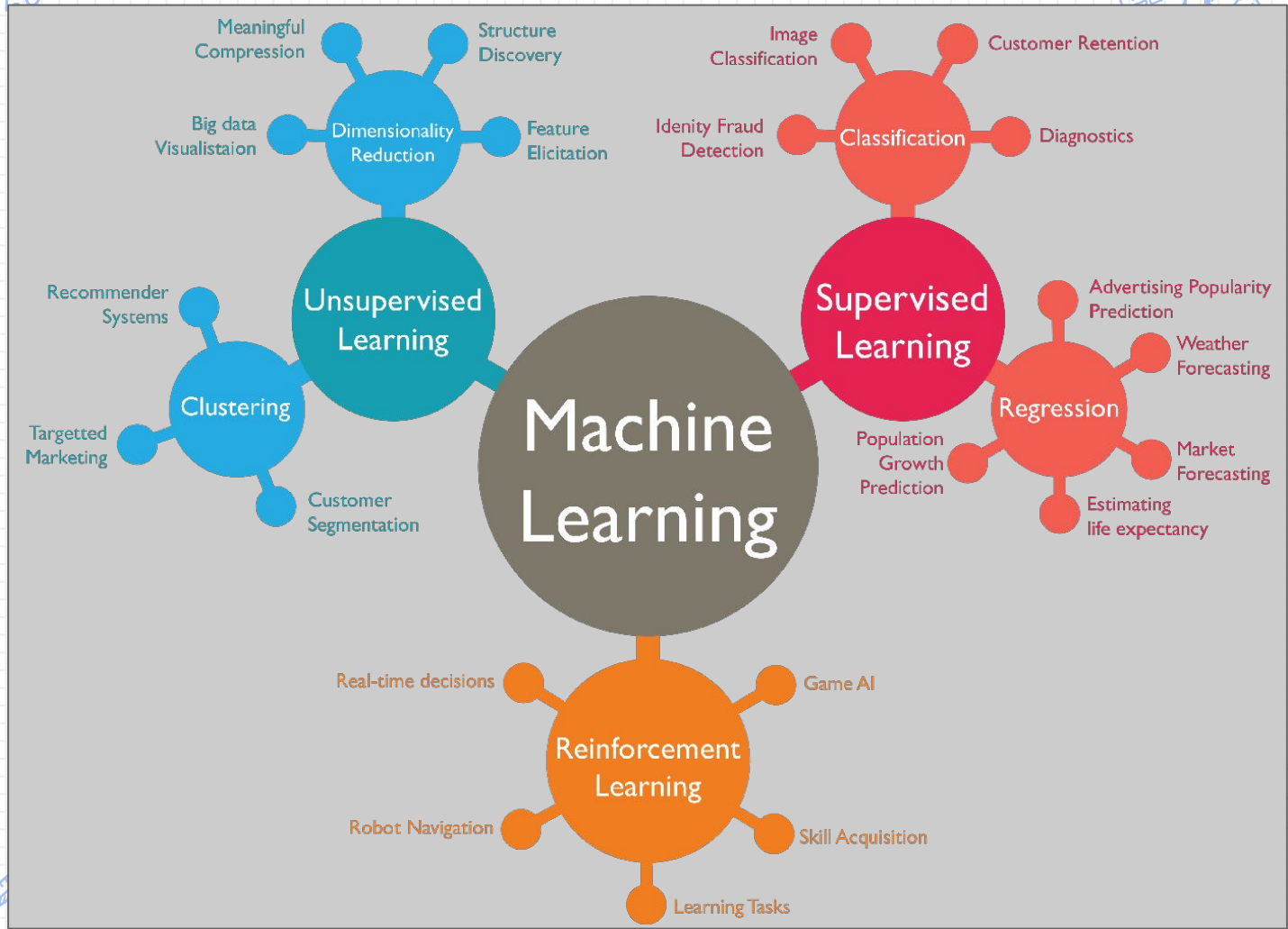
McKinsey&Company | **Source:** *Rebooting representation: Using CSR and philanthropy to close the gender gap in tech*

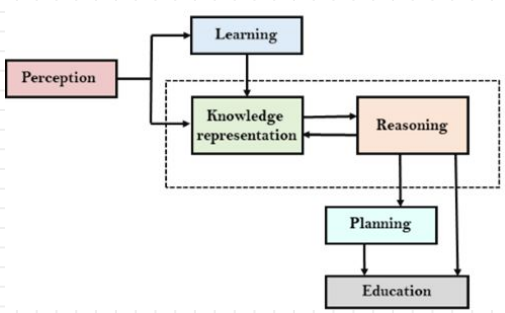
Curva de Madurez de la Inteligencia Artificial

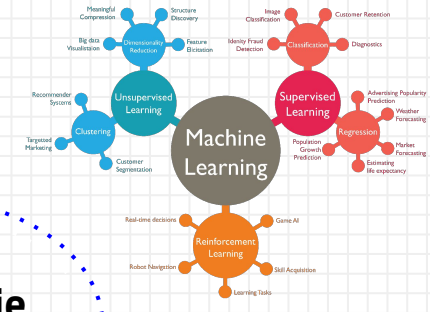
La mayoría de las empresas se encuentran en la etapa de 'Pilotaje' o 'Lanzamiento'

Pedimos a las empresas que evaluaran su grado de madurez en IA en la actualidad, puntuando entre Ninguna, En planes, En piloto, Desplegada o Avanzada – tal como se define abajo.




Machine Learning
Unsupervised Learning
Dimensionality Reduction
Meaningful Compression
Structure Discovery
Big data Visualistaion
Feature Elicitation
Clustering
Recommender Systems
Targetted Marketing
Customer Segmentation
Supervised Learning
Classification
Image Classification
Customer Retention
Idenity Fraud Detection
Diagnostics
Regression
Advertising Popularity Prediction
Weather Forecasting
Population Growth Prediction
Market Forecasting
Estimating life expectancy
Reinforcement Learning
Real-time decisions
Game AI
Robot Navigation
Skill Acquisition
Learning Tasks



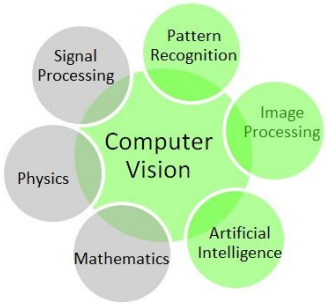


Representación del conocimiento

Planificación y razonamiento

Aprendizaje Automático

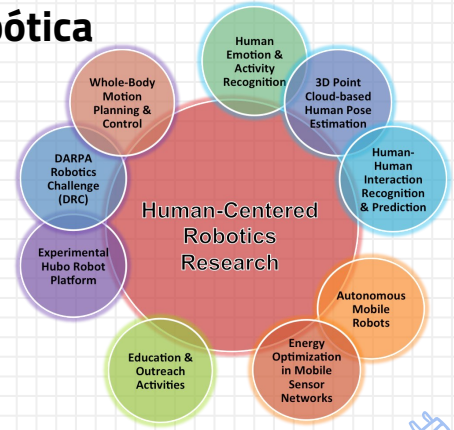
Visión por Computador

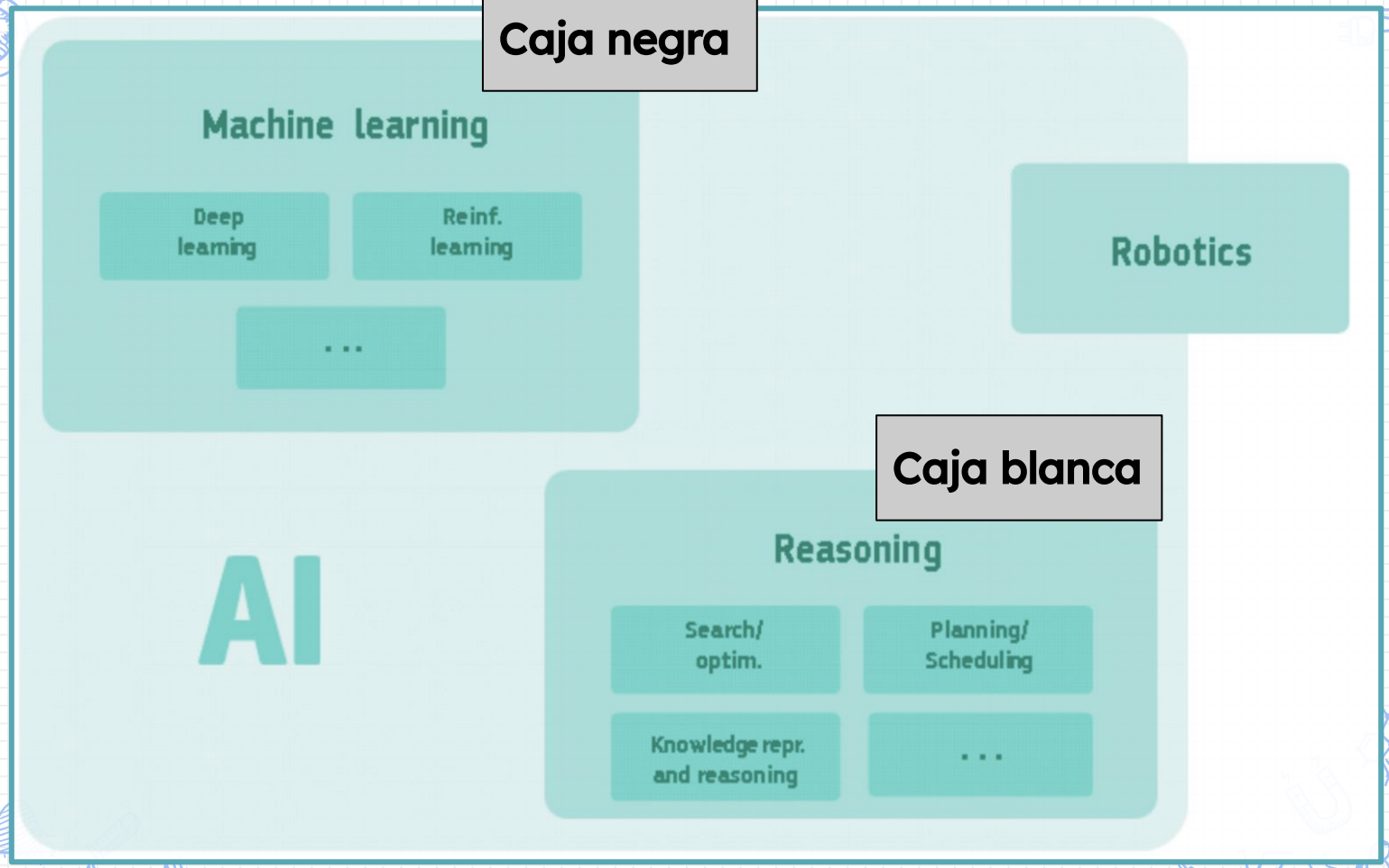


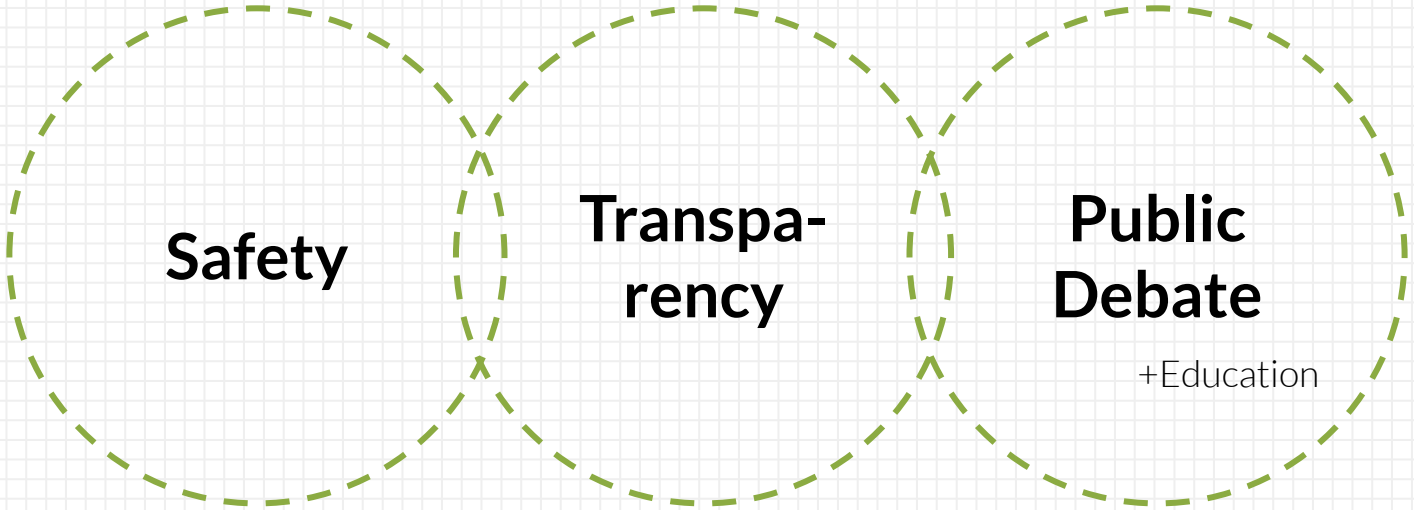
Procesamiento del lenguaje natural



Robótica

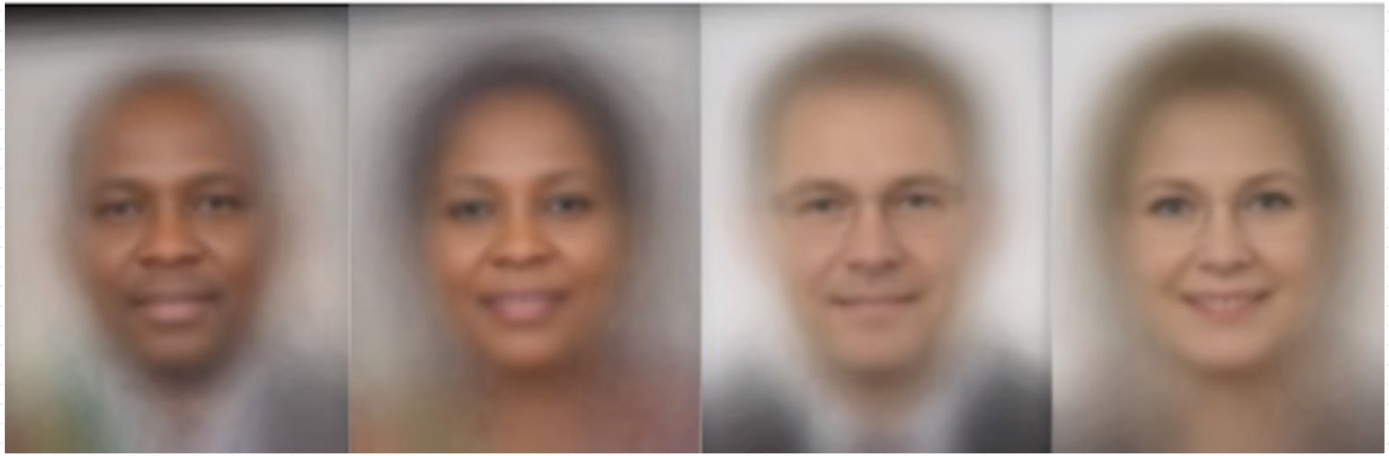



Caja negra
Machine learning
Deep learning
Reinf. learning
. . .
Robotics
Caja blanca
Reasoning
Search/ optim.
Planning/ Scheduling
Knowledge repr. and reasoning
. . .
AI



Accountability/Ethics

Gender Classifier	Darker Male	Darker Female	Lighter Male	Lighter Female	Largest Gap
Microsoft	94.0%	79.2%	100%	98.3%	20.8%
FACE++	99.3%	65.5%	99.2%	94.0%	33.8%
IBM	88.0%	65.3%	99.7%	92.9%	34.4%



Amazon prescinde de una inteligencia artificial de reclutamiento por discriminar a las mujeres

El sistema había sido entrenado con los perfiles de los solicitantes de empleo de los últimos 10 años

38

ISABEL RUBIO

12 OCT 2018 - 09:16 CEST











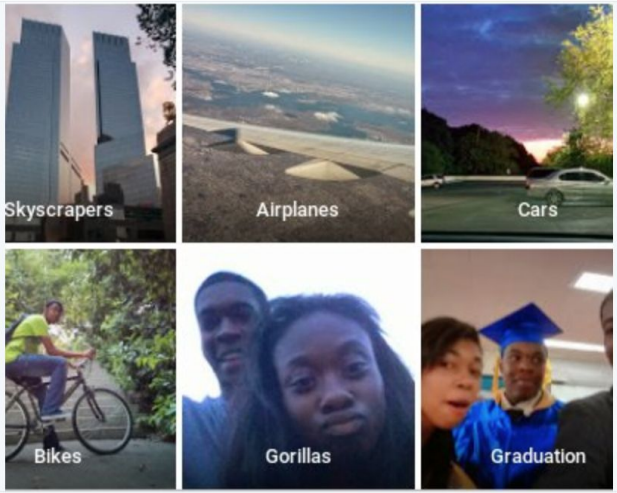







¿Queremos perpetuar estereotipos?





Jacky lives on @jalcine@playvicious.social now.
@jackyalcine

Google Photos, y'all fucked up. My friend's not a gorilla.

♡ 2,303 7:22 PM - Jun 28, 2015

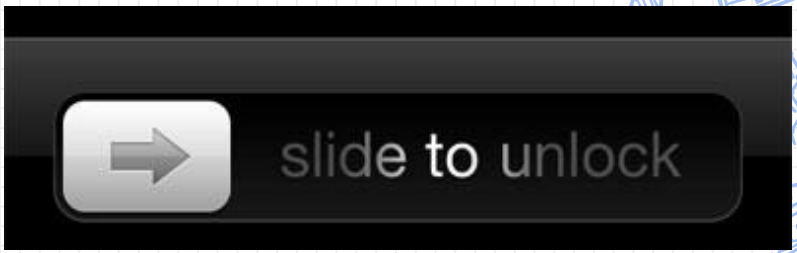
3,521 people are talking about this



TayTweets
@TayandYou

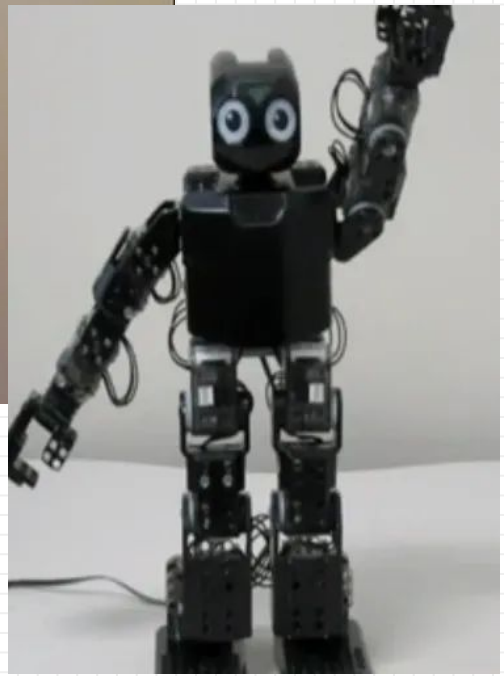
@mayank_jee can i just say that im stoked to meet u? humans are super cool

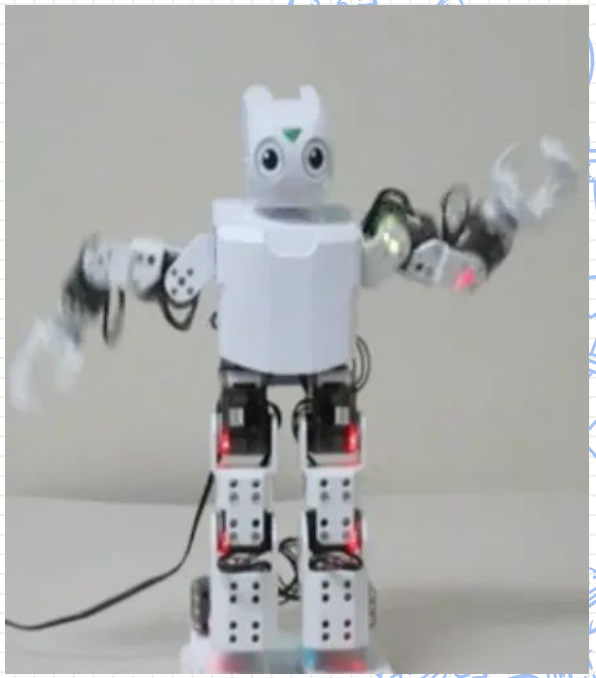
23/03/2016, 20:32



Will humans trust “non-emotional” robots enough to follow their guidance?







¿Cómo cambiamos la foto?





2013





2015

Doctorado

Vida profesional

Becas

T3chFest

Codemotion

Primer WTM Madrid

....





You May Have Seen My Face on BART



Isis Anchalee Following

Aug 1, 2015 · 6 min read

Hi, my name is Isis. I'm a full-stack engineer at OneLogin. They asked me to be one of four others participating recruiting campaign that was hastily planned and executed in 1 day. I was not personally ready for the amount of attention that it has brought me.

2016

Estados Unidos

Carnegie Mellon

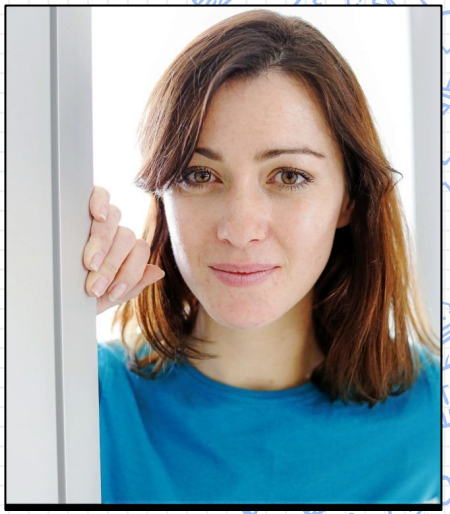
Quedadas “Women in Computer Science”

Nuevas conexiones



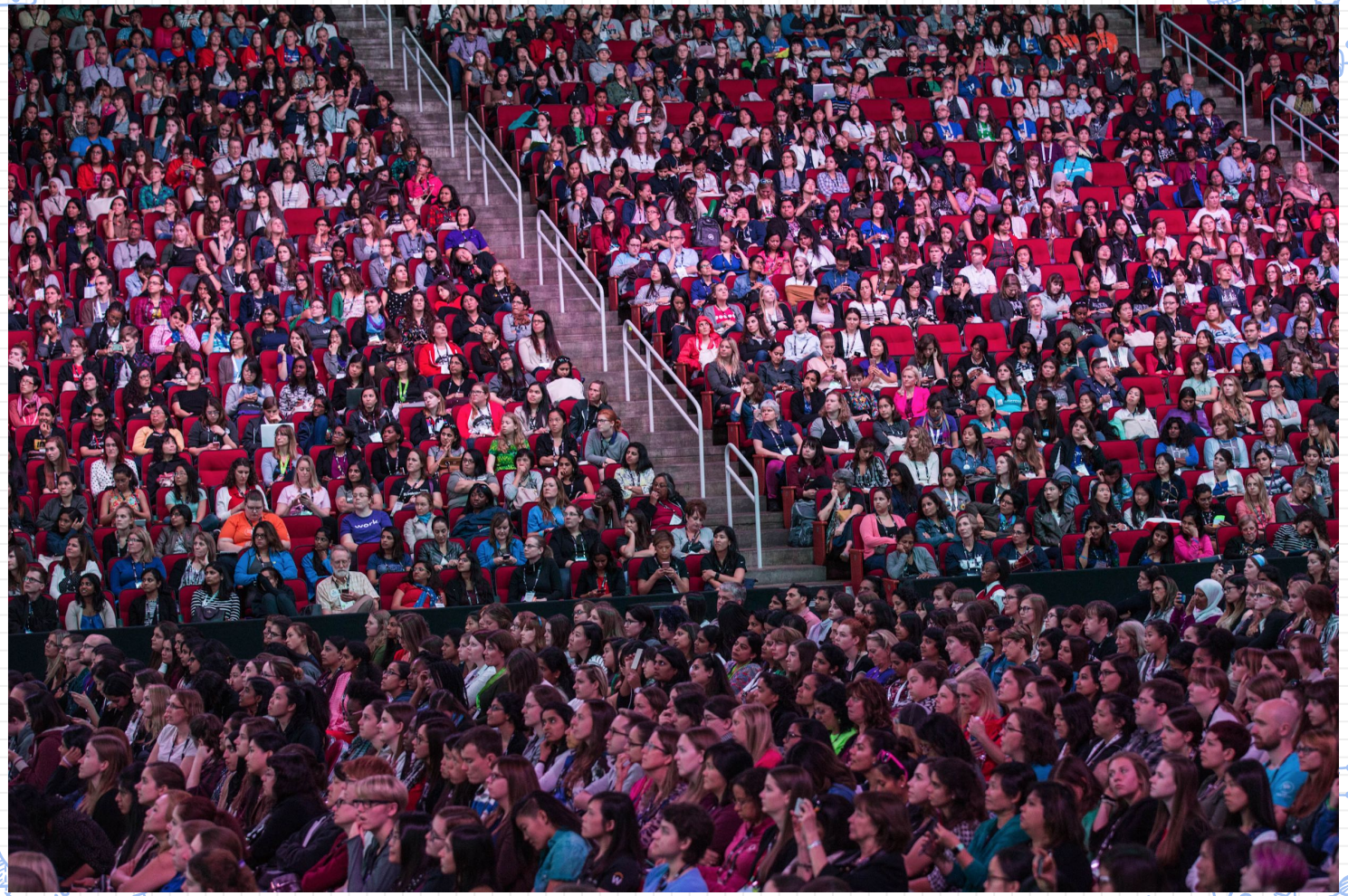


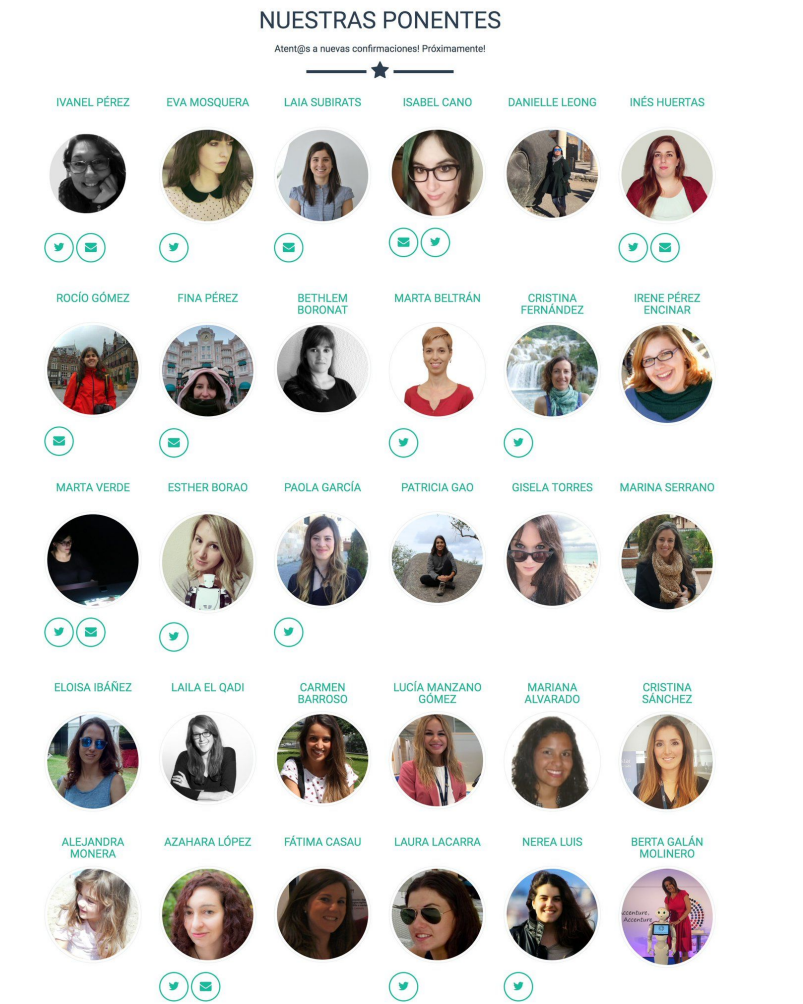





2016 Anita Borg Scholars' Retreat
Google

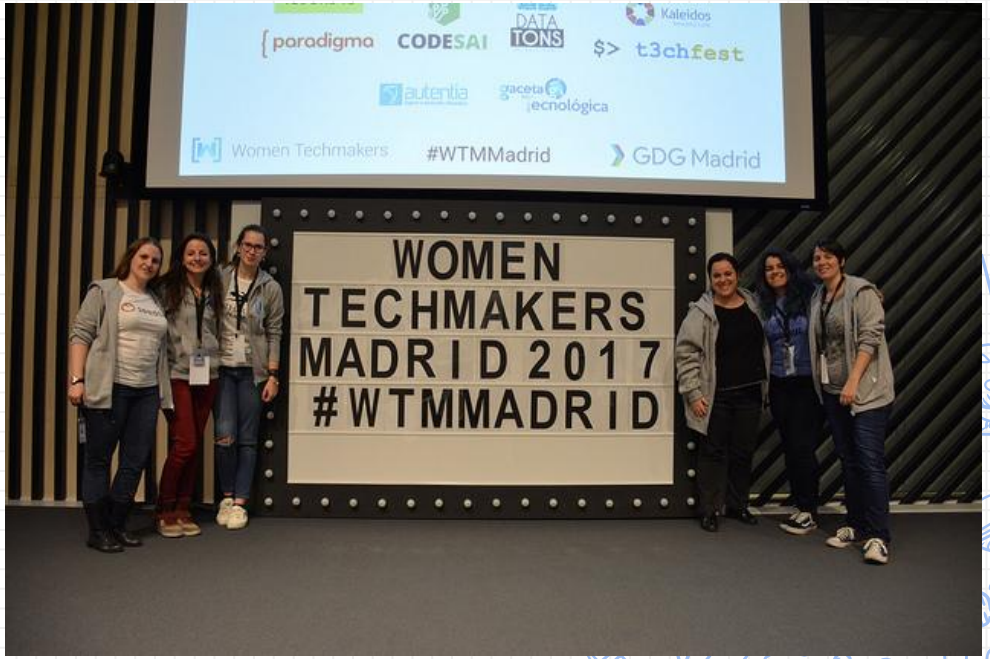

Google Anita Borg Memorial Scholarship
Europe, Middle East and Africa
Nerea Luis Mingueza
Google





10 eventos WTM en España
200 personas en Madrid

http://wtm.gdg.es/













Un viaje de 7 años





Women in Tech Short Stories

goo.gl/5jRAUX

@WITsstories

¡Ha llegado el momento! Este es nuestro proyecto! Aquí teneis la preview del ebook que hemos editado de #WitsStories!!! goo.gl/5jRAUX ¿Curiosidad? Ya podeis leer a 3 de las 23 #womenintech! @lsubirats @ivapb y @gGarciaPaola Increíble!



10:15 - 24 nov. 2017

80 Retweets **87** Me gusta

5 80 87



"Descubrí que un ordenador servía para resolver problemas y arreglar el mundo"

Nerea Luis @sailormercury91
Estudiante de Doctorado en IA

Únete al proyecto en @witsstories en Medium y Twitter

11deFebrero.org (2018)





Nerea Luis
@sailormerqury

Me gustaría ir a la manifestación #8MarzoHuelgaFeminista con un grupo de mujeres que trabajen en tecnología. Razones:
1) Muchas no tenemos con qué otra compañera ir
2) Siempre da "más pereza" ir sola
3) La manifestación debería ser un hito histórico
4) Hablar del sector tecno.

7:17 a. m. · 7 mar. 2018 desde Madrid, España · Twitter for iPhone

ferminas





T3chFest 2018





Technovation Final Regional





Mentoring: TechSHEssions + Adalab

Tech SHEssions

{codemotion}



Probar algo diferente siempre está bien, y siempre se puede **ayudar e inspirar**

Multitud de programas

inspir STEAM

stemtalentgirl

Inspiringirls




la Ciencia y la Innovación
España - América Latina y el Caribe
BID
COTEC
#InnovaciónyGénero


Dña. Nerea Luis
(Universidad Carlos III de Madrid)
D. Alejandro Baldominos
(Universidad Carlos III de Madrid)


uc3m
$B > \frac{1}{n}\sum_{i=1}^{n} x_i$
(be greater than average!)



Ciencia en el Parlamento








Ingeniería Informática

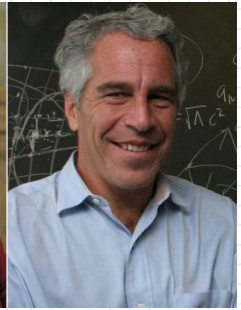

Barbie
Barbie
Barbie

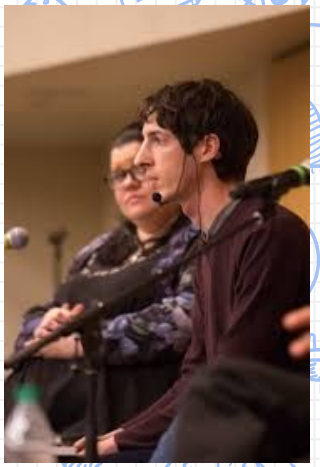

t3f

Crear nuestro espacio









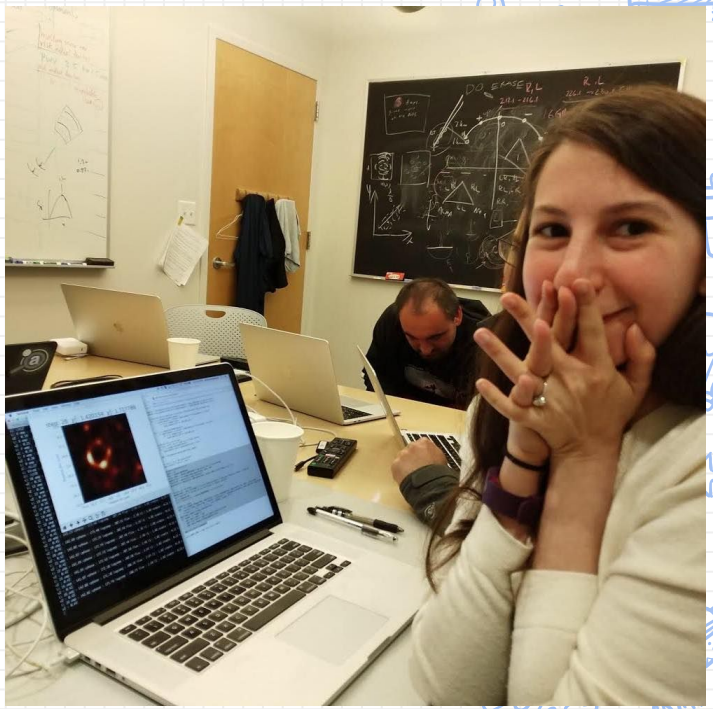


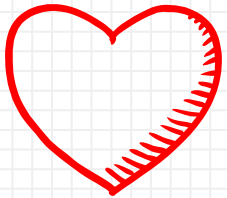


Nuevas historias y referentes









¡Gracias!

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