Benefits of diverse & interdisciplinary co-creation for HEP - a showcase

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ICHEP2016CHICAGO

6 August 2016

THE Future of HEP

Final decisions about our 30 year projects,
about a work generation of physicists,
are taken by 5-year term politicians

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Final decisions about our 30 year projects,
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We accept this reality, but can better highlight our value

OUTREACH & Knowledge Transfer

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1
Invite Society to our comfort zone

2
Explain our needs and solutions

3
Connect it to benefits of society

THE Port - swiss non-for-profit association

We demonstrate the value of fundamental science to society

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CO-CREATION & Hackathons

1

Leave our comfort zone to other domains

2

Bringing our methods to societies needs

3

Connect it to our world without need to explain it

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OUTREACH together CO-CREATION

Audience:
Supporters ⇔ Challengers

Domain:
Physic's ⇔ Stakeholders

Process:
Understanding ⇔ Experiencing

Co-creation turns Diversity & Inclusion from a moral obligation into a fundamental necessity

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Challenges

5 Events
25 Challenges
+300 Participants

Diversity and Inter-disciplinarity

DiploHACK

Kingdom of the Netherlands

Human Rights

DIPLO HACK

26. - 27. February 2016

@ Impact Hub Geneva

www.diplohack.org

IMPACT HUB Geneva

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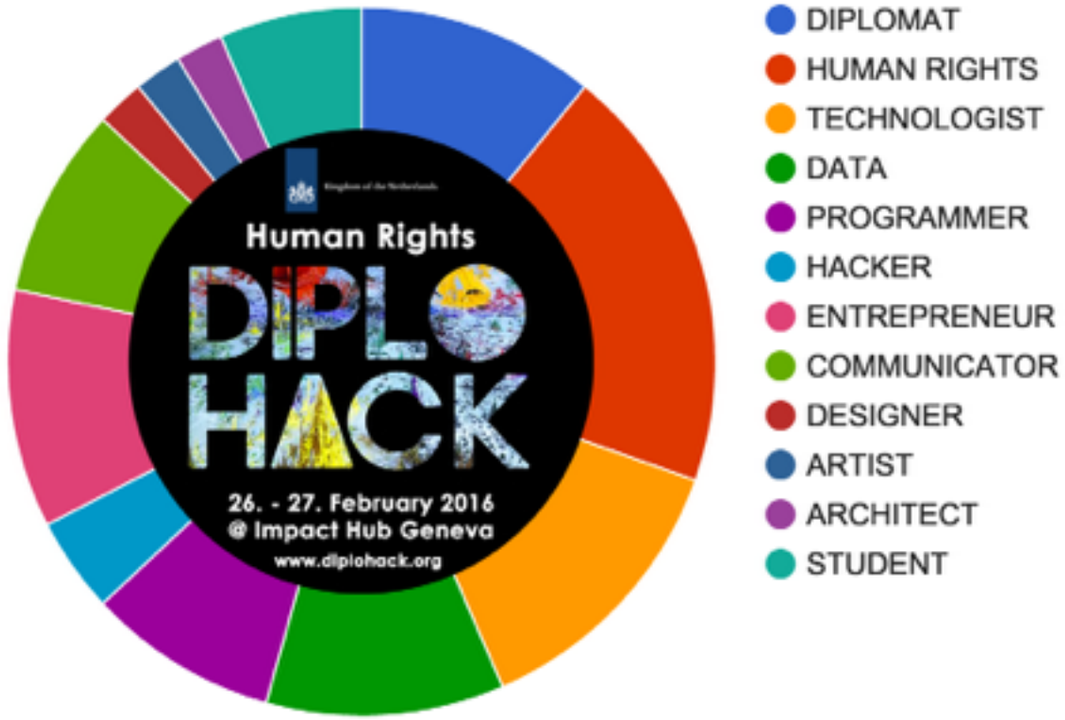
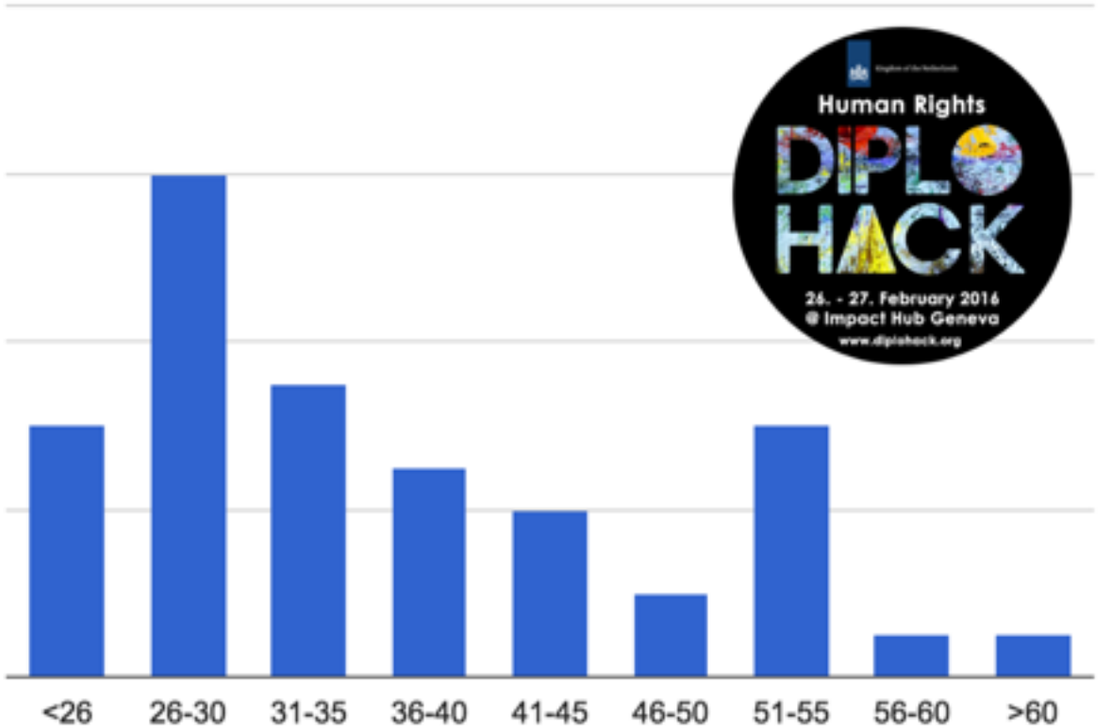
DIVERSITY and Inter-disciplinarity

Human Rights DiploHack 2016 - Participants Background Distribution

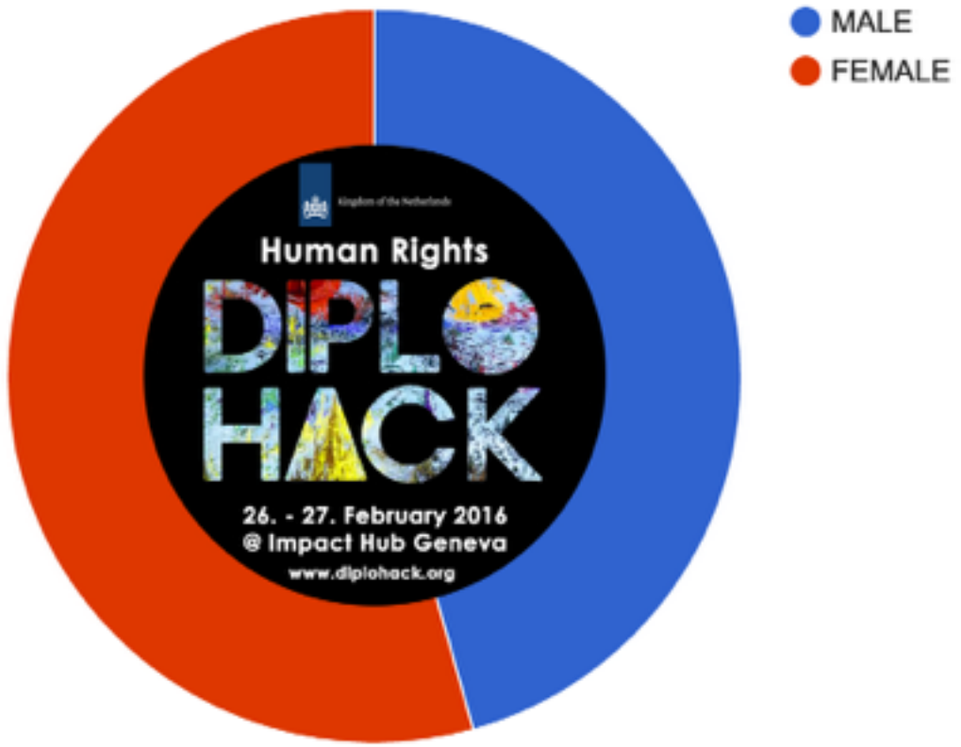


Human Rights DiploHack 2016 - Participants Age Distribution



Human Rights DiploHack 2016 - Participants Nationality Distribution

Human Rights DiploHack 2016 - Participants Gender Distribution



Better Body Bag

Keeping semiconductor detector dry

&

Allowing ICRC Forensic teams to longer visually identify dead bodies

have very similar needs

GENEVA HEALTH FORUM

UNITED NATIONS ECONOMIC AND SOCIAL COUNCIL ECOSOC

WORLD HUMANITARIAN SUMMIT

EPFL ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE

CODEV

TEDx Lausanne

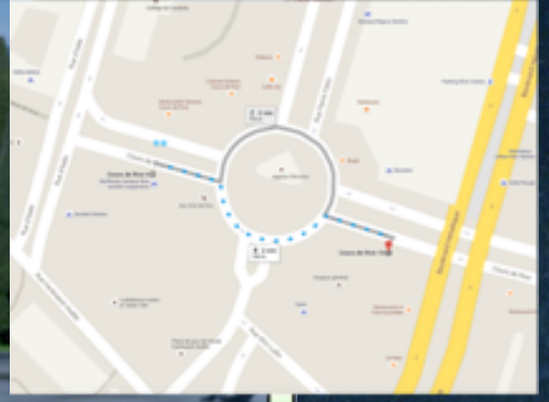
x = independently organized TED event

Social Solutions Research association

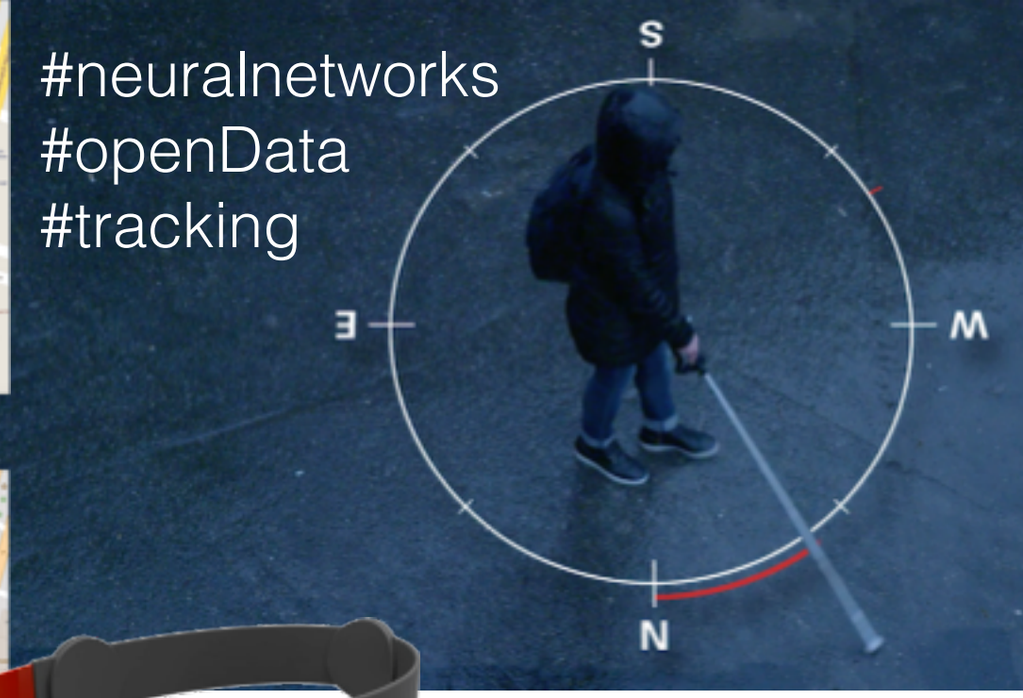
RED!NNOVAT!ON

http://socialsolutionsresearch.com/

Blind Navigation



#neuralnetworks
#openData
#tracking



SITG
LE TERRITOIRE GENEVOIS À LA CARTE

tpg
</open data>

GENEVA CREATIVITY CENTER GCC

CERN Summer Student Webfest

citizen cyberscience centre

HUG Hôpitaux Universitaires Genève

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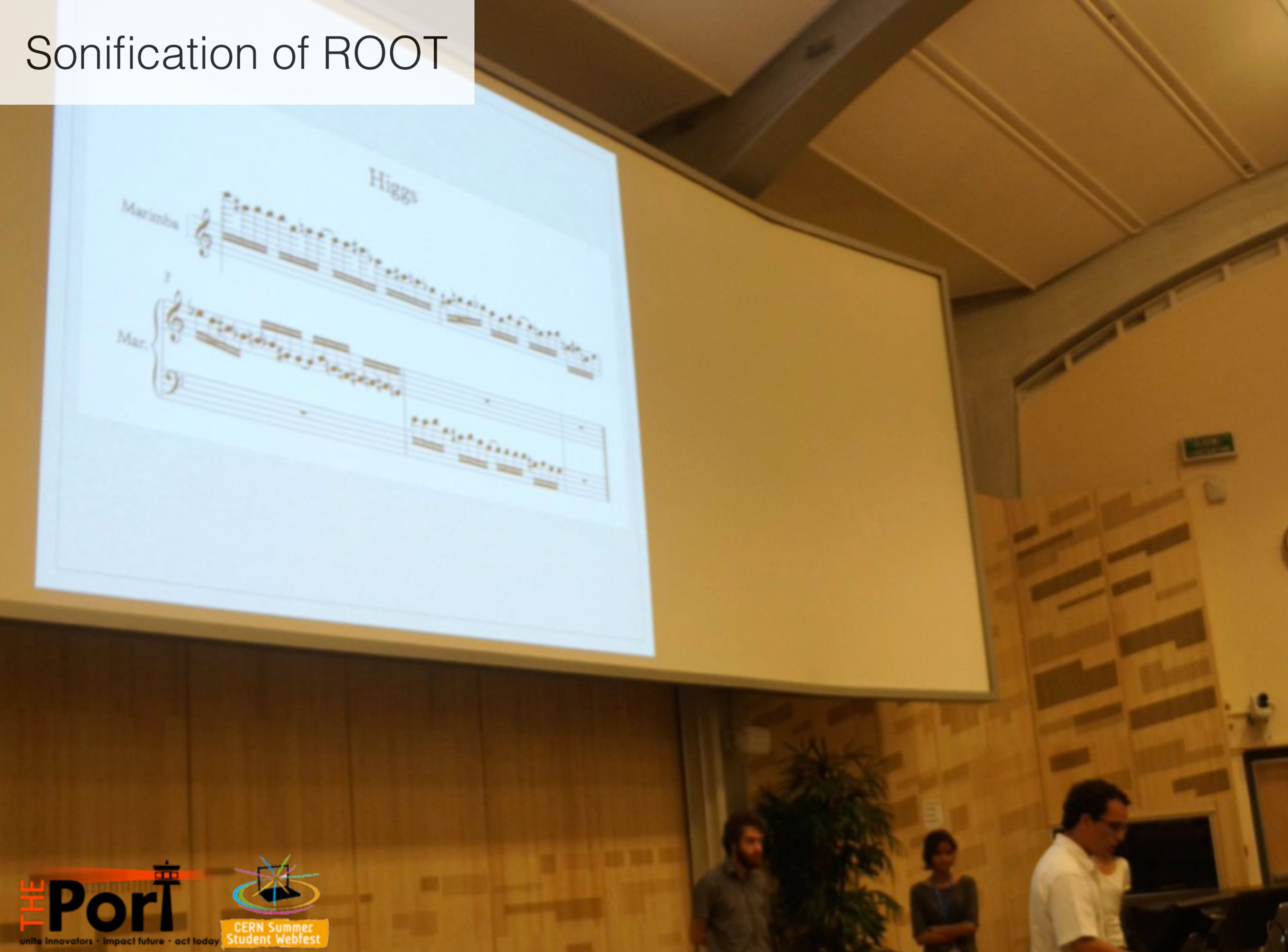
http://simetka.cz/OGH/

Sonification of ROOT



Human Rights DIPLO HACK

PICTRUE

-

machine learning algorithm identifies if & what kind of Human Rights violation happens on any picture & video

Kingdom of the Netherlands

IMPACT HUB Geneva

UNITED NATIONS HUMAN RIGHTS OFFICE OF THE HIGH COMMISSIONER

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PICTRUE - result

Researchable evidence database

Self-learning Assessment Framework for Rights (SAFR)

- integrated tool **incrementally improves** filtering, sorting & verifying images
- based on previous data, tool **increases capacity** to corroborate evidence from as many data sets as possible
- shifts human rights framework **from reactive** model **to proactive** model

Machine Learning Image Pattern Recognition

99.99% child classroom
0.01% none
0.0% child soldier
0.0% child labour

58.2% child classroom
31.6% child soldier
8.1% child labour
1.9% none

DATA & DATA & DATA

e3emonitor.ch

wildtreetech.com

DATASAURI datasauri.org

#BigData
#openData
#block-chains
#DeepLearning
#NeuralNetworks
#NaturalLanguageProcessing

OCHA

unitar UNOSAT

Analysing 6.2e+8 TeV rice dijet events is humanitarian innovation for ICRCs air food drops In South Sudan

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HRC31 - Bert Koenders & Kate Gilmore

"We have to innovate diplomacy."

Bert Koenders

"Human Rights 2.0"

Kate Gilmore

"Never forget, always share and act in solidarity."

Kate Gilmore, Deputy High Commissioner for Human Rights

"We need you, we need innovation for the cause of human rights!"

Bert Koenders, Minister of Foreign Affairs of the Netherlands

DIPLOHACK - Testimonials

"This small group of individuals hacked into the future where rights are respected."

Kate Gilmore, Deputy High Commissioner for Human Rights

Children with UV Hypersensitivity

John Ellis

Jorge Cham

Luca Parmitano

LHC startup & Higgs discovery
are highlights of my life

using these methods to impact &
save children's life became my
complementary passion

Diverse co-creation is a great tool

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Global Humanitarian Lab (GHL)

A humanitarian innovation “CERN” is forming

We are looking for additional academic partners

@HumanitarianLab

Global Humanitarian Lab