

# 3rd Chile-France Academic Forum

Workshop on Data-driven Sciences

Conclusions

30 September 2021

# Session presentation:

- **Areas represented:**

astronomy, physics, clima-geophysics, mathematics, statistics, bio-health

- Covering: Data-Science /AI fundamentals (math, stats, optimization), cutting edge applications to large scale science problems (e.g. Astro) and critical economic/social issues (e.g. health system wating list, hydric ressources, ...)
- Worldclass research and transdisciplinary developments going on, both in France and Chile (ex: Alerce chilean astro alert broker for LSST observatory)

# Foundations for developing Data-d-Sciences:

- **Longstanding, fruitful Chile-France collaborations in many areas**, both individual and institutional (e.g. : CNRS UMI in Chile for Astro and Math Modeling CMM)
- **DataScience/AI national policies in Chile and France** (Villani report, 4 large interdisciplinary research institutes in France + many regional). Large Excellence Centers also Chile (CMM, NAIR, Fundamental of Data).
- **High level training capacities towards Data-Sciences** (math, stat, comp.sci) and for interdisciplinarity in both countries (though much smaller volume in Chile)

# Barriers hindering scientific and social impact:

- **Absence of national policies for Open Data Access** to Data of public interest/for public benefit (“privatization” of the value of Data)
- **Artificial Intelligence (as Natural) cannot just “be bought”**: solving Economic/social/clima problems using Data requires more than just Data : new models, new algorithms, new (and “traditional”) science, and interdisciplinary developments.
  - Examples:** \* medical language corpus in spanish for Nat.Language Processing (high impact for public health),
  - \* satellite monitoring of hydric resources, .....
- Being users/buyers of algorithms and “off the shelf AI” is not enough.  
**Don't try to be Google, we (Chile-France) need to (and can) be more**

# Opportunities through Chile-French cooperation

- **Natural laboratory for sciences** (natural, social), lots of data being gathered (much more to come) lots of real world problems (local, global)
- **Data-(driven)-Sciences developments are difficult/costly.**  
Sharing/comparing experiences about endeavours has large potential impact:
- Organize: anual Scientific Event (multidisciplinary, bilateral) on Data-Science/AI/Data-driven-Sciences including: fundamentals, applications, developments
- Organize and fund: **transdisciplinary Chile-France collaboration/capicyt building programs** (Postdocs, Ph.D, etc...) focusing on :

**Data-Science  $\leftrightarrow$  Data-Driven Sciences  $\leftrightarrow$  Social/economic impact**