



Summer of HPC

Automated Extraction of Metadata from Climate Simulations: Helping Researchers Share, Discover, and Use Data

SoHPC Participant:

Mahmoud Elbattah

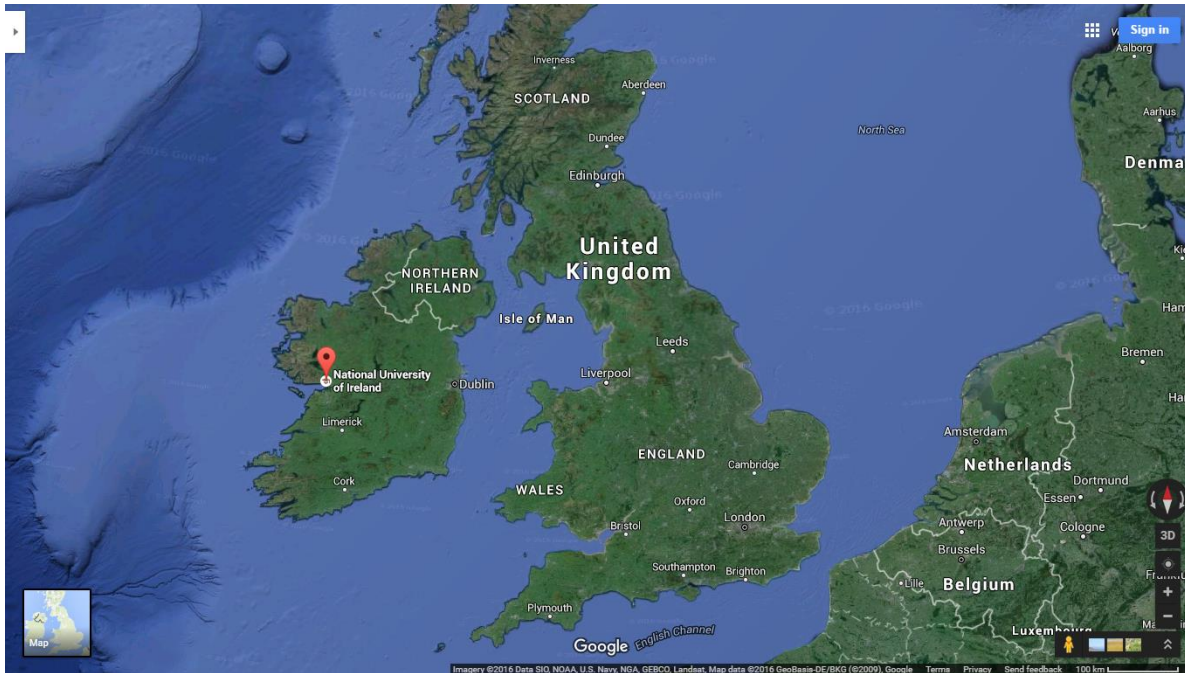


Aristotle University of
Thessaloniki

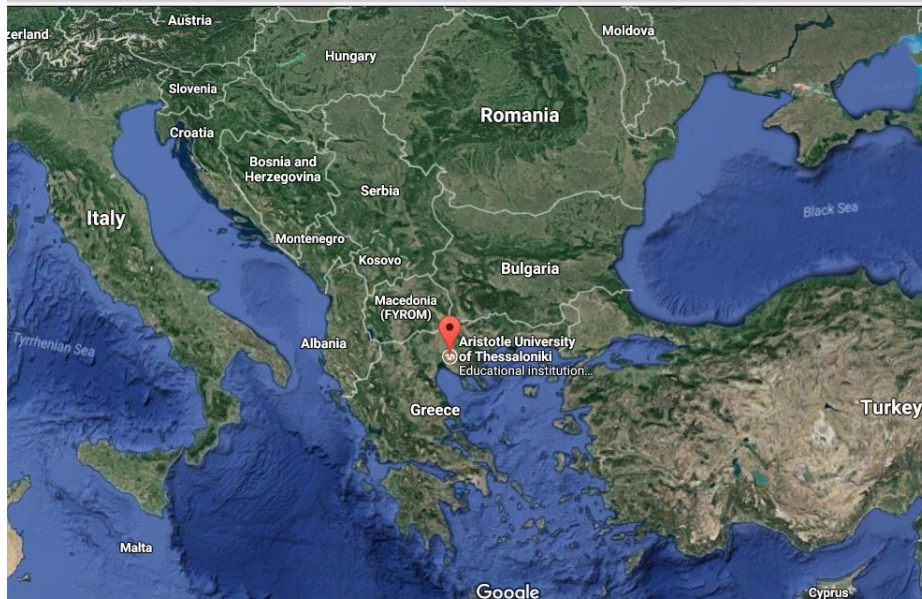


31st Oct 2017

Home University: National University of Ireland Galway



Host University: Aristotle University of Thessaloniki, Greece



Project Mentors



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Project Overview

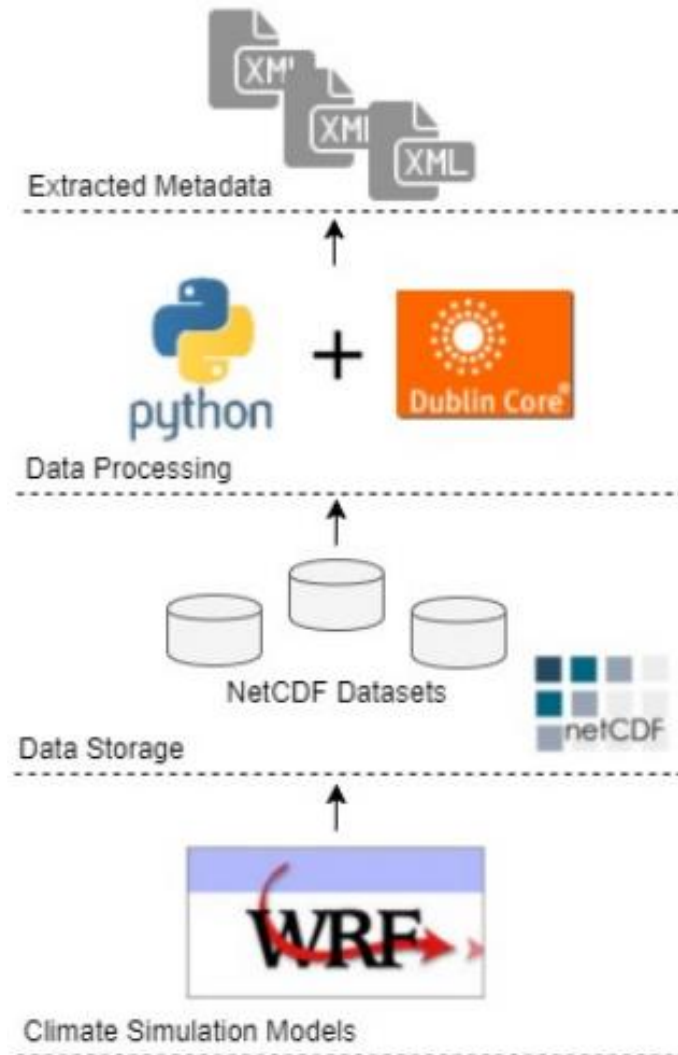


Figure 1: Project overview.

NetCDF Abstraction Model

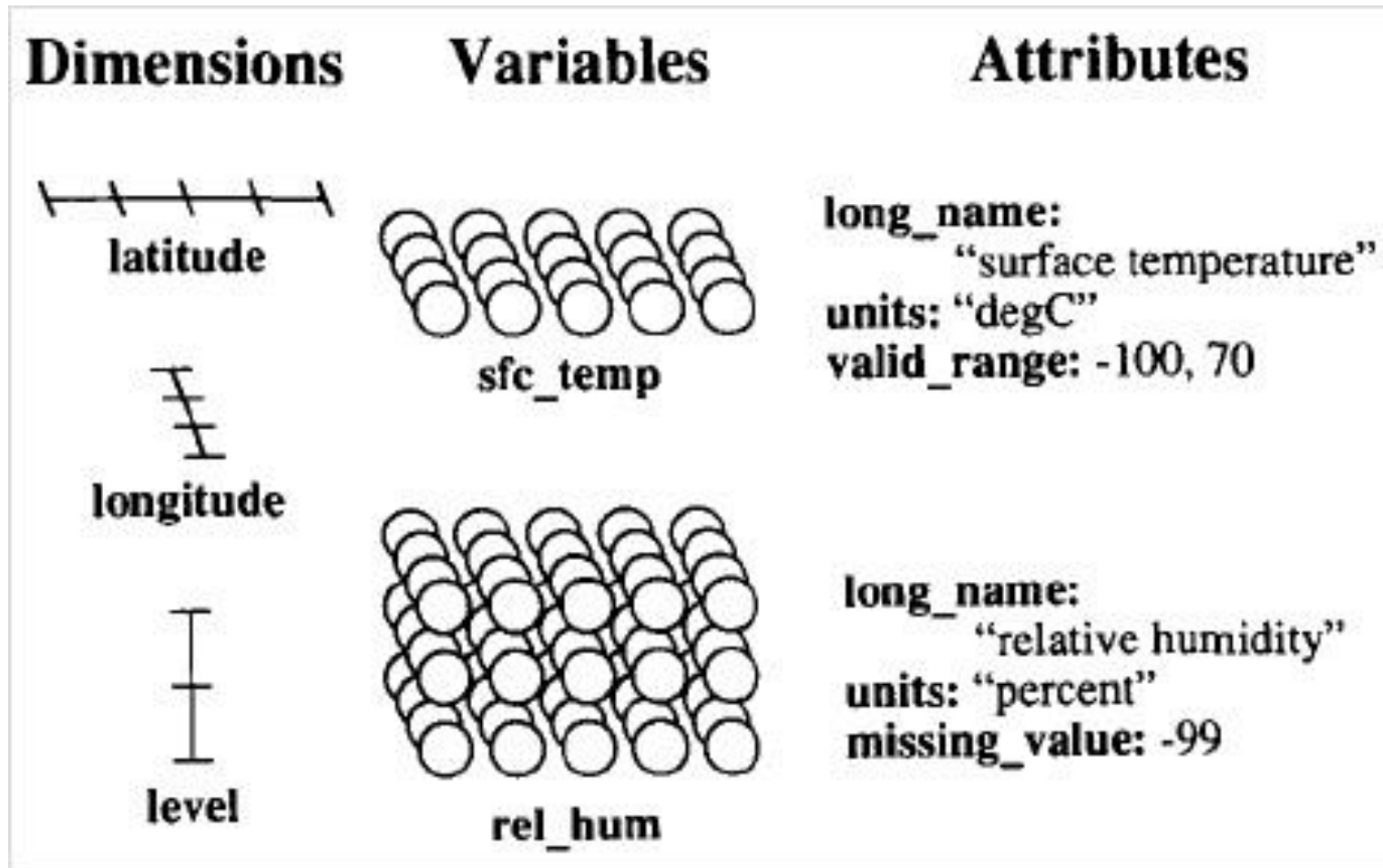


Image Source:

Rew, R., & Davis, G. (1990). NetCDF: An Interface for Scientific Data Access. *IEEE Computer Graphics and Applications*, 10(4), 76-82.

Output

- More than 40K metadata fields were extracted.
- 940 DublinCore-based xml files.

Python Code:

https://github.com/Mahmoud-Elbattah/Extract_Metadata_NetCDF

Contribution to SoHPC Blog

Visualising the World Map of Supercomputers



<https://goo.gl/sbapBc>

Contribution to SoHPC Blog (cont'd)

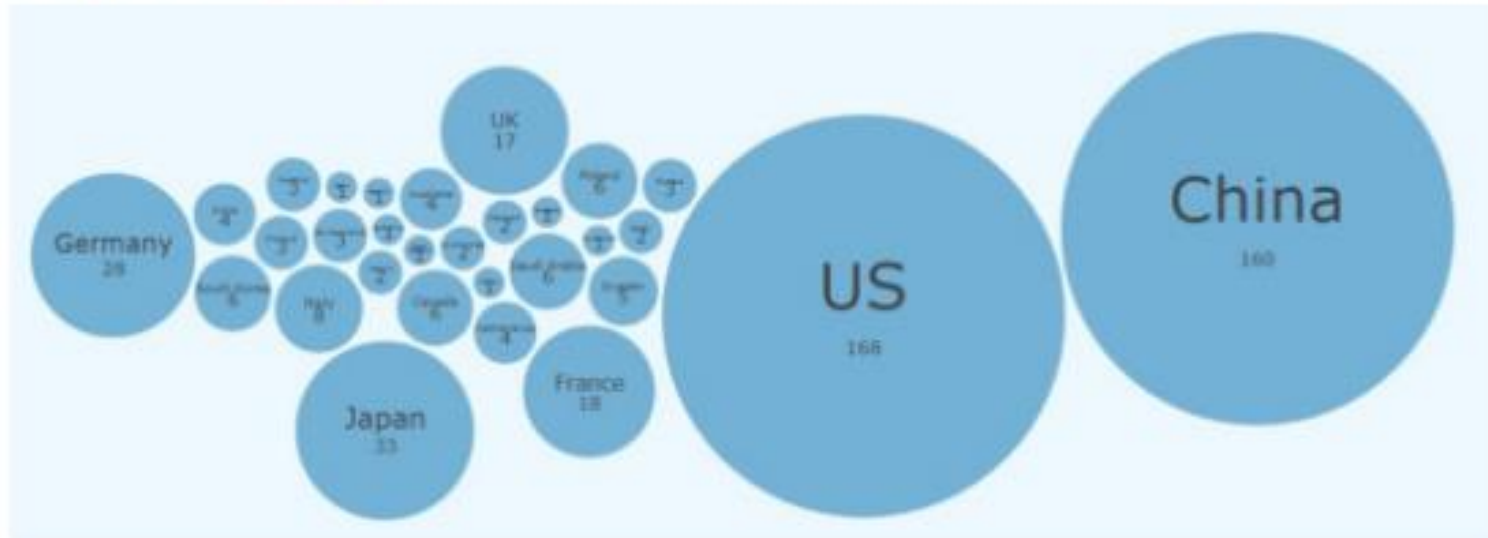
Visualising the World Map of Supercomputers



<https://goo.gl/sbapBc>

Contribution to SoHPC Blog (cont'd)

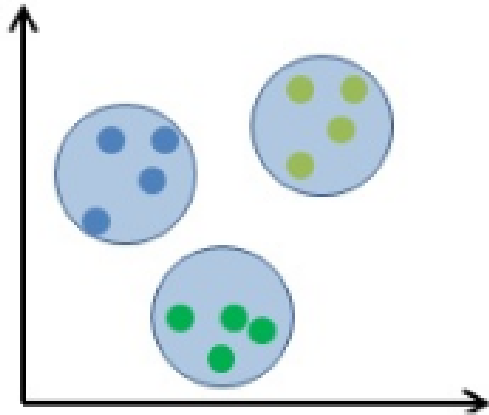
An Interactive Visualisation to Explore the Top500 List



<https://goo.gl/YywhU7>

Contribution to SoHPC Blog (cont'd)

The Clusters of Supercomputers: The Top500 List in the Eyes of Machine Learning



<https://gallery.cortanaintelligence.com/Experiment/Top500-Supercomputers-Clustering>

Contribution to SoHPC Blog (cont'd)

Visualising how the World's Centre for Supercomputing Shifted over the Last Decade



<https://goo.gl/y8c9NB>

Acknowledgements

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- Eleni Katragkou, Aristotle University of Thessaloniki
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Thanks All, It was a Great Summer!