



# HITS

Heidelberger Institut für  
Theoretische Studien



# Knowledge Discovery Interest Group

virtual IVOA interop meeting Sydney

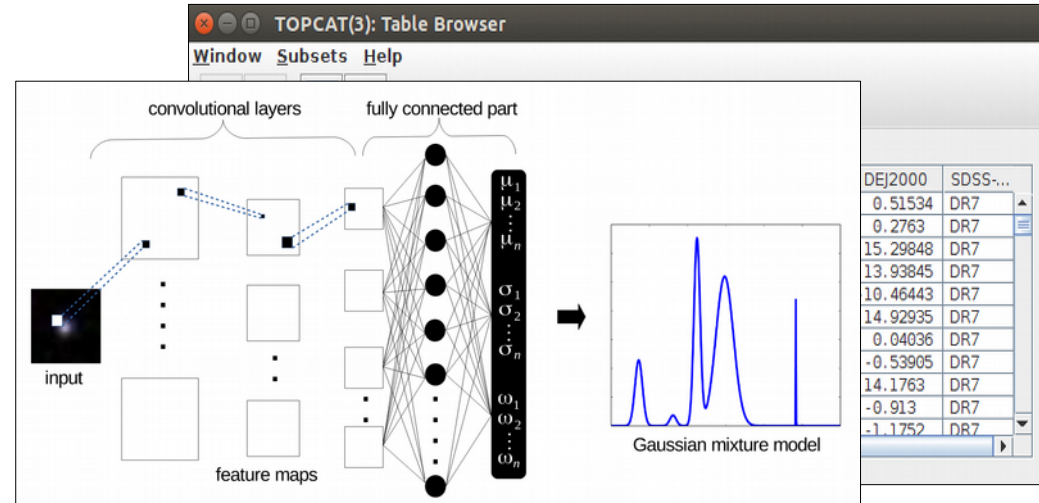
# KDIG / ongoing work

## Database storage for ML

- store uncertainties
- queries with uncertainty
- reproducibility / training & validation data
- provenance

## Explorative access

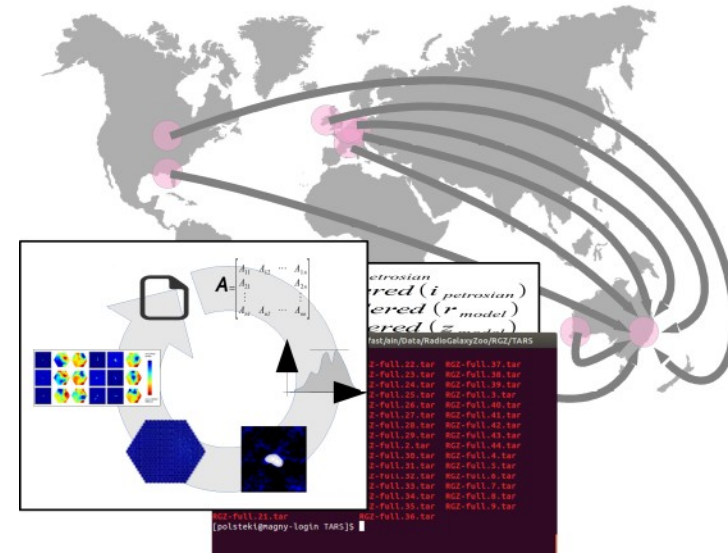
- developing prototypes
- defining requirements
- annotation: semantics/DM
- see video by D'Isanto  
link on KDIG wiki page



# KDIG / ongoing work

## Bringing code to the data

- how to find resources
- how to package code
- how to register functionalities
- how to orchestrate workflows across different centers



## Accessing the VO for ML tasks, polymorphic access

- HiPS is perfect to get data as required by many deep learning applications  
→ hipsy (Tomas Boch)  
+ very cool SIA HipsToFits prototype (François Bonnarel)
- Experiment using Pan-STARRS data

# KDIG Related Sessions

Discussion: is the VO a digital plate archive or an observatory?

- machine learning analysis is building telescopes for a virtual sky
- tables are great but how to do data-science on images, spectra, cubes, time-series?  
(Single Source Science)
- are science platforms a solution? how do we standardize those  
GWS → Session on science platforms on Tuesday 20:30 UTC

## KDIG Sessions

- Possible small KDIG session next week. Will be announced on KDIG wiki.