Towards a New Repository for Feature Model Exchange

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Feature model exchange

Feature model repository

Who wants?

Wants: the researcher

- **I want to upload models to the repository, so that my models are available for others**.

- I want to syntax check my models before uploading in the repository.

- I want to generate a universal identifier for my models in the repository.

- I want to create communities

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- **I want to have recommendations according to my profile, so that I can do better model selections**
- I want to see model's metrics, so that I can have extra information about the models.
- I want to display models in the repository
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Wants: the researcher and user

- **I want to manage versions of my models**.
- I want to know some indicators about the models in the repository such as ratings or number of downloads
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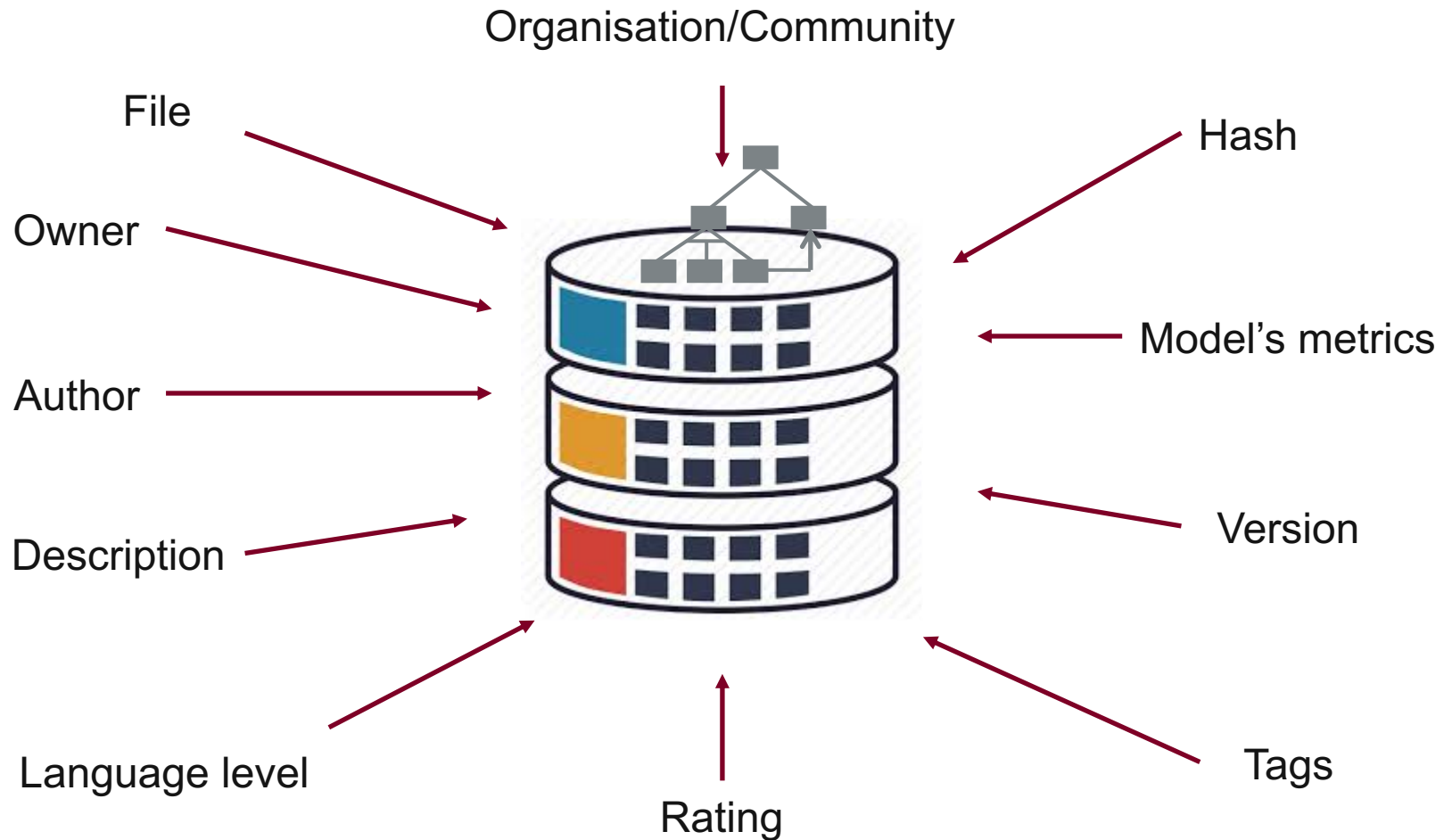- I want to download models from the repository.

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Wants: the developer

- I want to have an API that can interact with the repository

The identified information needs

Organisation/Community

File

Owner

Author

Description

Hash

Model's metrics

Version

Language level

Rating

Tags

Technological stack

- **Extensible**. This repository feature responds to the need of providing rest interfaces, support for multiple attributes per model as well as the creation of communities.

- **Light**. Due the amount of optional features identified it would be interesting to rely on a small core.

- **Reliable**. There are several repositories that were built during the last years. It would be advisable that the core component of our repository is backed up by a larger project.

Existing solutions

Dependencies with others

- *Language Levels for Feature Modeling Notations.* We identified five levels:
    - Basic (mandatory, optional, set …),
    - Cardinality based feature models ({n..m}),
    - Complex-constraints feature models (cnf ctc)
    - Attributed feature models(atributes and complex contraints).
    - Non-traditional feature models(multifeatures, evofm, etc)

Dependencies with others

- *Textual Variability Modeling Languages*
  - *XML*
  - *SPLOT*
  - *TEXTUAL*
  - *GRAMMAR*

Dependencies with others

- *Usage scenarios for a common feature model language*
  - *Sharing*
  - *Analyzing*
  - *Teaching*

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