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AfCAI
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Software

This page summarizes information on the software tools developed by GEIST.

Explainable Artificial Intelligence (XAI) Tools

- **InXAI** is a Python library for Intelligible XAI that allows to evaluate, compare and analyse different explainable AI algorithms
- **LUX** is a Python library for generating uncertain local explanations in a form of human understandable (and executable) rules.
- **KnAC** is a Python library for Knowledge Augmented Clustering. It allows for human-in-the-loop conformance checking between domain expert and automatic clustering.
- **CLAMP** ia a Python library for Cluster analysis with multidimensional bounding boxes. It allows for in-depth cluster analysis with state-of-the-art XAI algorithms.

Affective Computing tools

- **Several prototypes of affective games** for conducting affective research in rich but controllable game-based environment
- **BandReader** is a software simplifying physiological data acquisition from wristbands as well as other measurement platforms such as Bitalino

Semantic wikis for collaborative knowledge engineering

- **Loki** is a novel semantic wiki platform offering strong reasoning capabilities of Prolog, support for business processes and rules, and support for collaborative knowledge engineering.

Knowledge base editors (stable, supported 2009-2016)

- **HWEd** is online web editor for creating XTT2 models, that are run by **HeaRTDroid** inference engine.
- **HQEd** is an advanced visual editor for modularized rule bases developed with the XTT2 knowledge representation for rules. Originally developed within the HeKatE project. Extended during the BIMLOQ to include support for rules integrated with business processes. Enhanced

wrt GUI within the Parnas project.
- **VARDA** is a tool for fast conceptual prototyping of rule bases ARD+ method
- **HJEd** is a visual prototyping of rule bases with the ARD+ method

Reasoning engines (stable, supported 2009-2016)

- **HeaRTDroid** is a rule-based inference engine both for Android mobile devices, and desktop solutions supported by visual web editor **HWEd**. It is distributed under the GNU General Public License
- **HeaRT** is a hybrid rule inference engine for modularized rule bases developed with the XTT2 knowledge representation for rules. It also supports practical rule verification. Originally developed within the HeKatE project. Later on extended towards reasoning with business processes as well as in integrated in a semantic wiki.
- **PelletHeart** a prototype inference engine linking the HeaRT rule engine with Pellet, the Description Logics reasoner.

Knowledge base translators (supported 2009-2016)

- **HaThoR** is rule base translator tool from the XTT2 format to RIF, OWL (partially) and UML

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