

# 3d Brain Atlas Reconstructor

*Software dedicated for automatic generation of models of 3D brain structures.*

## Project goals

1. Creating software dedicated to automated reconstruction of 3D brain models. Key features:
  - ◆ Generating model of any combination of structures (ie. basing on structures hierarchy),
  - ◆ Arbitrary resolution of generated model (depends on source atlas quality only),
  - ◆ Exporting models in VRML format as polygonal mesh or volumetric data.
  - ◆ Modularity: One 3D model generation module, many wrappers for different input atlases.
2. Support the software with:
  - ◆ Own data (ultimate goal),
  - ◆ Existing 2D atlases (as training sets).
3. Creating special dataset format
  - ◆ Based on SVG format,
  - ◆ Adapted for handling representation of brain structures,
  - ◆ Supporting brain regions hierarchy,
  - ◆ Maximizing possibilities of atlas systems interoperability.
4. Ultimately, 3D Brain Atlas Reconstructor would be available as an open source project and on-line service with API.

## 3d Brain Atlas Reconstructor workflow