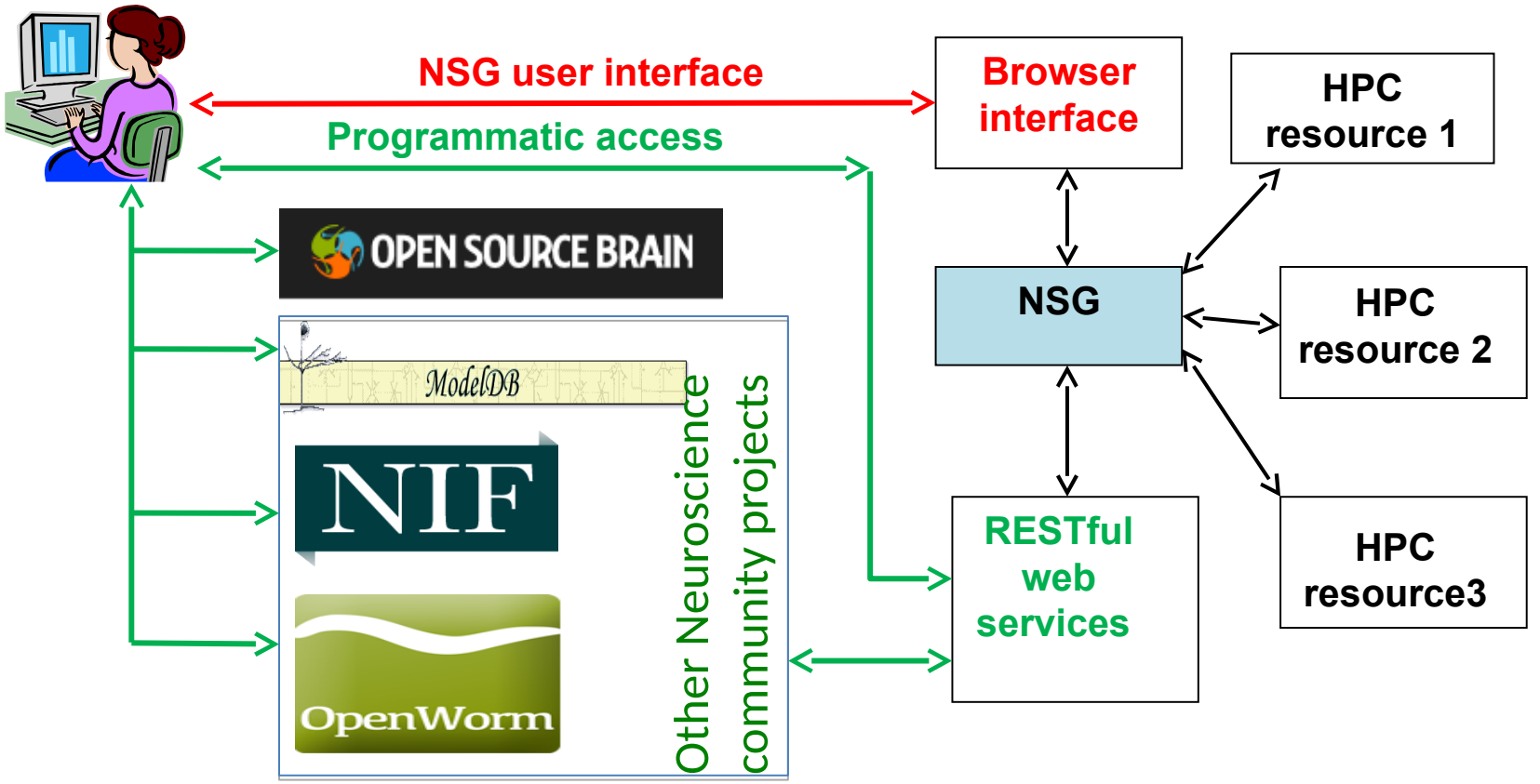
Neuroscience Gateway (NSG)

http://www.nsgportal.org

NSG facilitates access and use of High Performance Computing resources freely and openly for the neuroscience community via web-based and programmatic (RESTful API) access. Various computational neuroscience tools, libraries, pipelines and data processing software are made available on HPC resources.

NSG - Portal and Programmatic Access

NSG Portal: Simple and easy to use web interface
NSG–R: Programmatic access through RESTful services

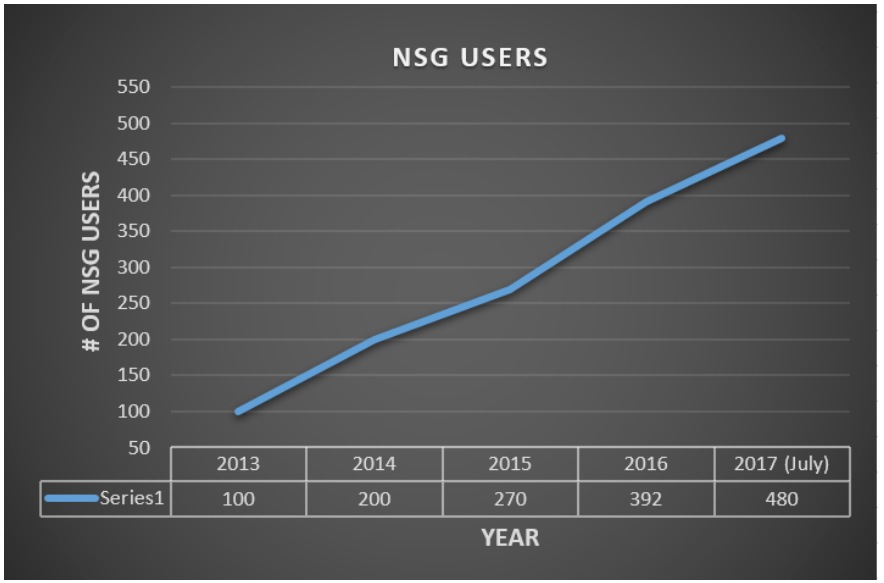


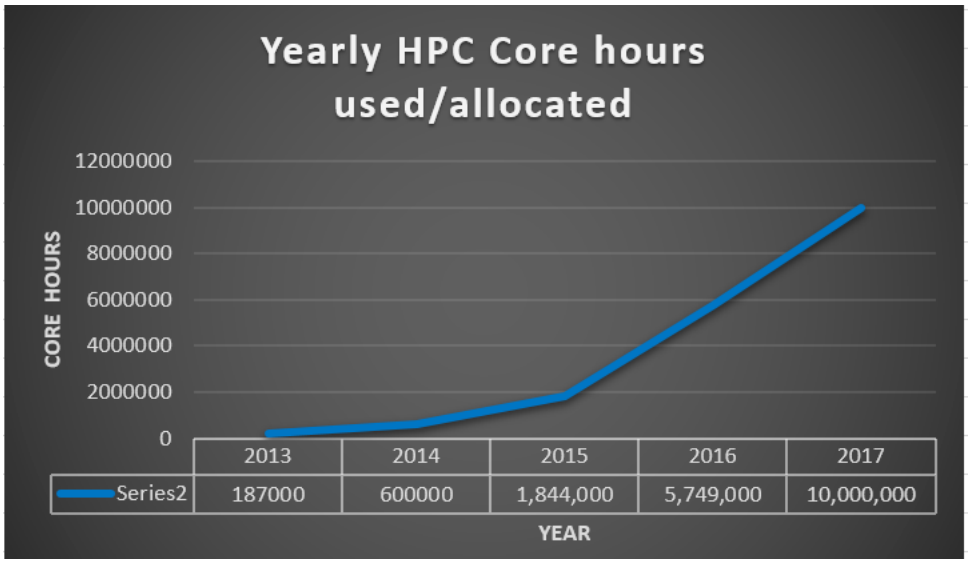
Currently available tools/software/pipelines

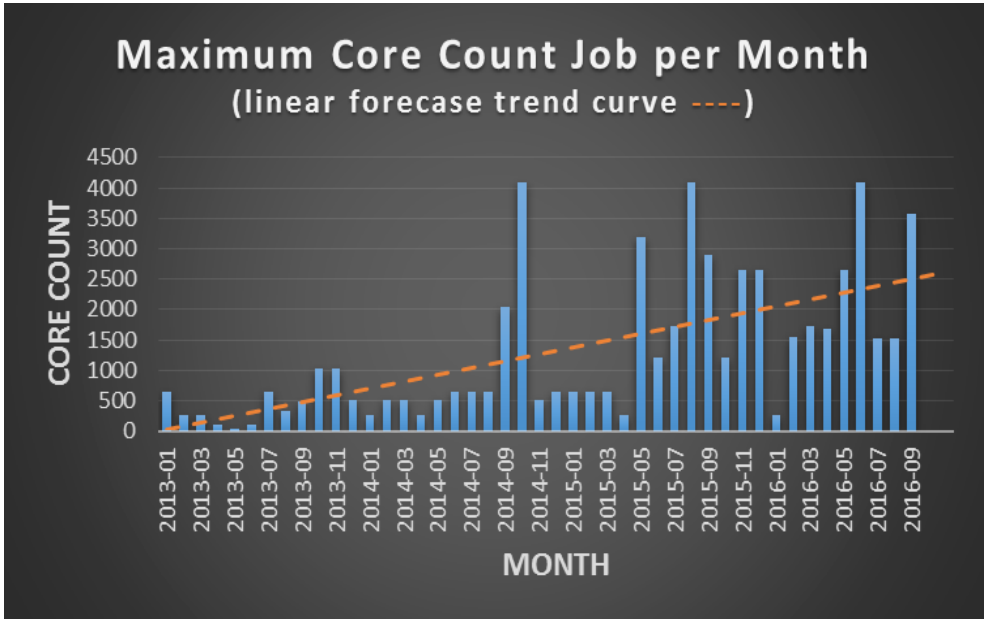
New tools are added continuously based on request from users, researchers, and developers

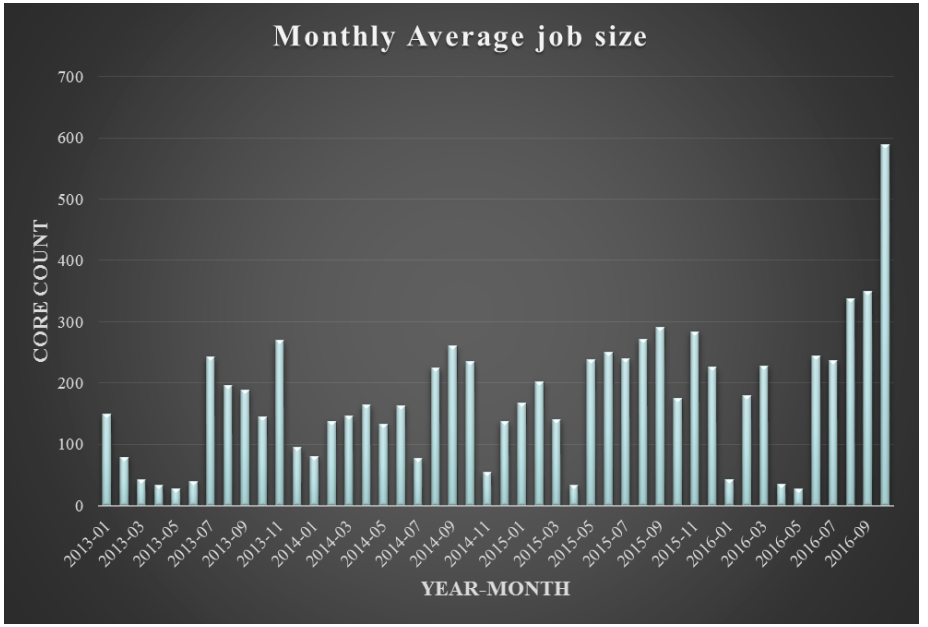
Current (July, 2017) tools, libraries, software, pipelines	
BluePyOpt, Michele Migliore et al, National Research Council, Italy	PyMoose
BRIAN	NEST
CARLsim, Jeffrey Krichmar, UC Irvine	NEURON
The Virtual Brain Personalized Medicine Pipeline, Petre Ritter, Humboldt University	Parameter Search Dieter Jaeger, Emory University
FreeSurfer	PyNN
Large Scale Neural Simulator Antonio Ulloa, Neural Bytes	Python
Matlab	R
TensorFlow	Octave
GENESIS	

NSG usage growing – since 2013





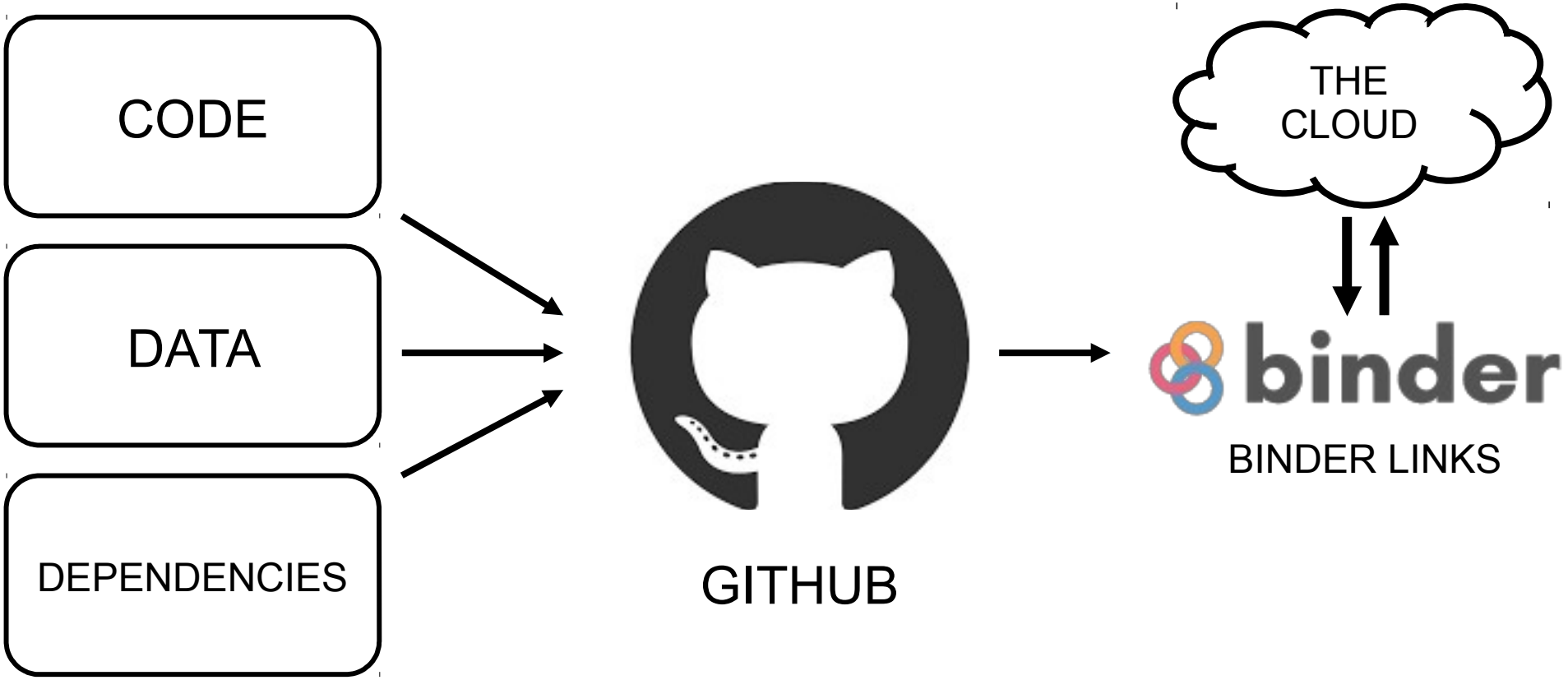




Binder

http://mybinder.org
(maybe http://beta.mybinder.org)

Turn a GitHub repo into a collection of interactive notebooks.
Open those notebooks in an executable environment, making your code immediately reproducible by anyone, anywhere.



- Reproduce figures
- Share code with collaborators
- Highlight an analysis
- Show off your codebase

Running live, in the cloud, for free

- Current work
  - Rebuilt Binder from the ground up.
  - More stable + faster.
  - Support for Python and Julia
  - Support interactive widgets and javascript
  -
- (near) future work
  - Adding support for R
  - Support multiple languages simultaneously
  - Make it easier to deploy your own Binder server
  - Support new user interfaces (RStudio, JupyterLab)

Useful links

Use mybinder

beta.mybinder.org

Deploy your own Binder

binderhub.jupyter.org

Get in touch

gitter.im/binder-project/binder

Get involved

github.com/jupyterhub/binderhub