# Open Source Development Tooling

Prof. Dr. Dirk Riehle

Friedrich-Alexander University Erlangen-Nürnberg

FLOSS B06

#### **Open Source and Innovation**

- 1. Legal innovation
- 2. Process innovation
- 3. Software tool innovation
- 4. Business model innovation

# **Tooling Innovation**

- Software forges
- Distributed version control

#### **Software Forge**

- A software forge is ...
  - A web-based tools platform for collaborative software development
  - Typically not just for one, but for many open source projects
  - Run as a service (though the forge software may be open source)

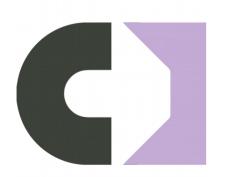
#### **Open Source Software Forges**







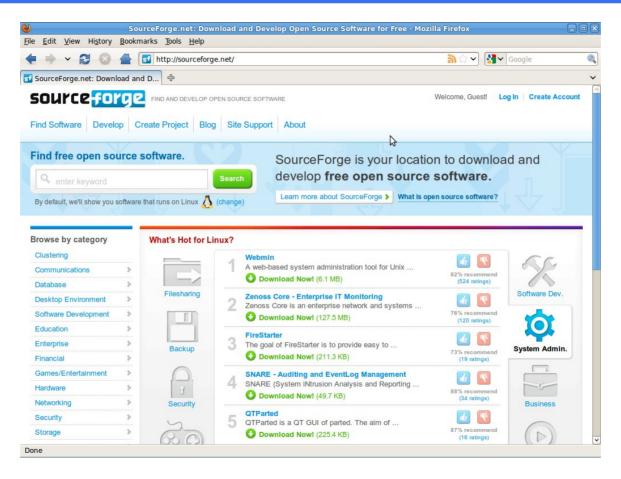




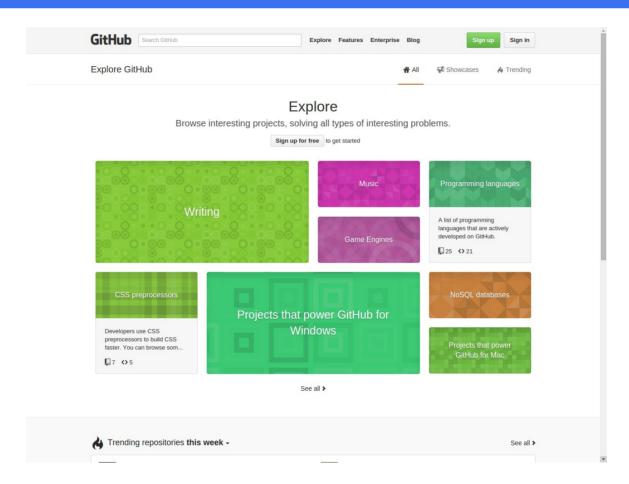




#### SourceForge



#### **GitHub**



#### **Innovative Features**

# A forge helps

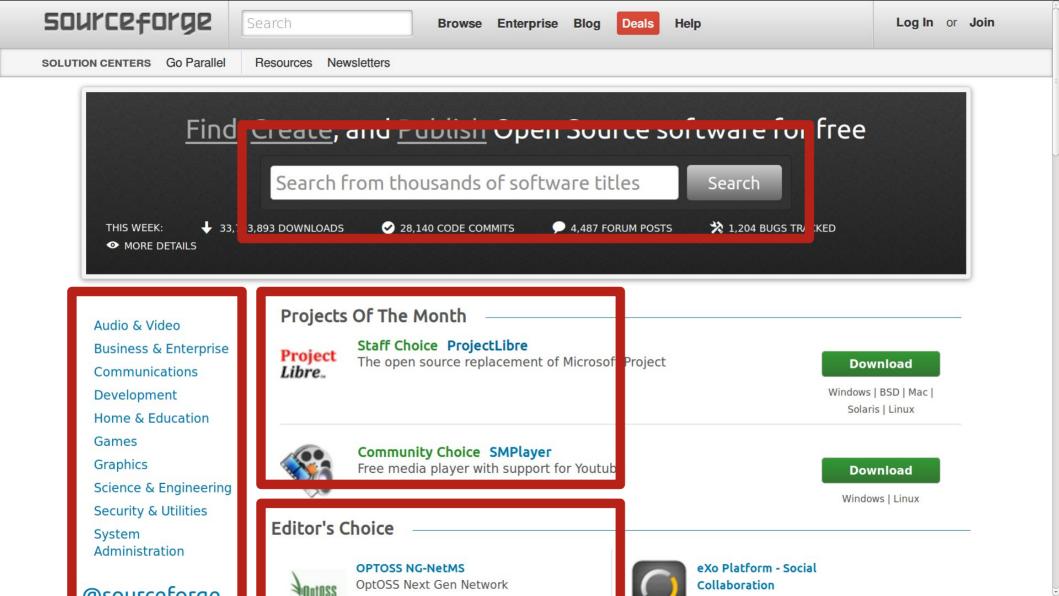
- 1. Community process
- 2. Improve code quality
- 3. Shares best practices

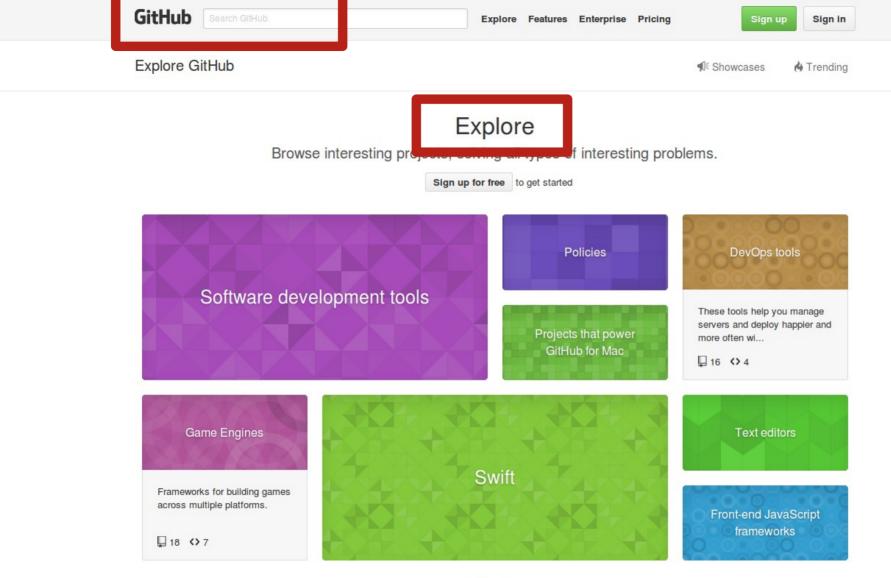
# The Five Stages of Volunteering (Recap)

#	Volunteer View	Project View
1	Find project	Market project
2	Understand project	Explain project
3	Engage with project	Engage with volunteer
4	Work within project	Work with contributor
5	Lead project	Enable career

#### Forge Support for #1 Market Project

- Support stumbling
  - Random display of project
  - Featured project of the week
- Support searching
  - Indexed search for keywords
  - Hierarchical browsing

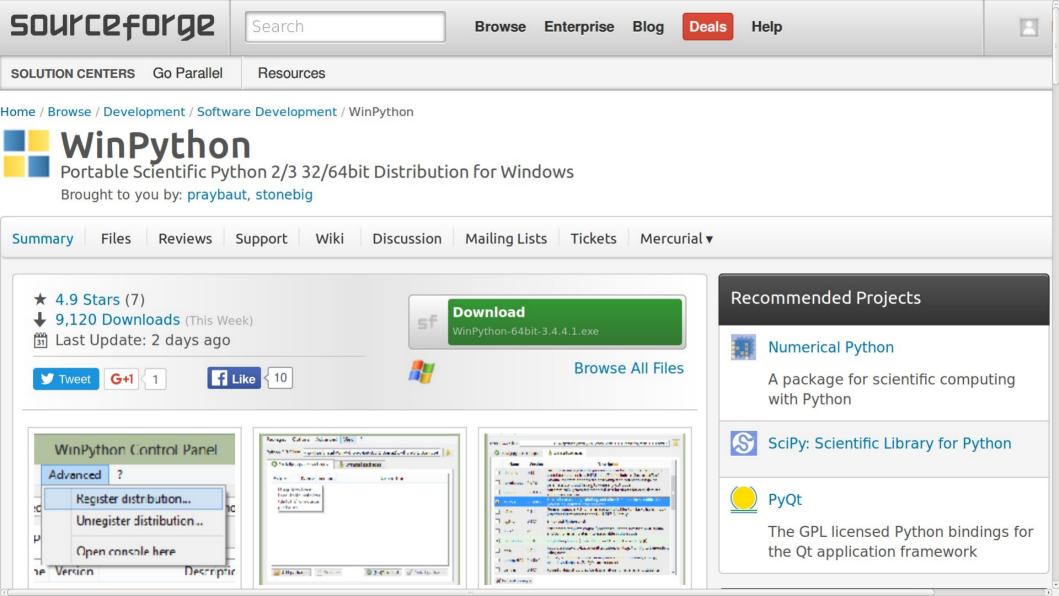




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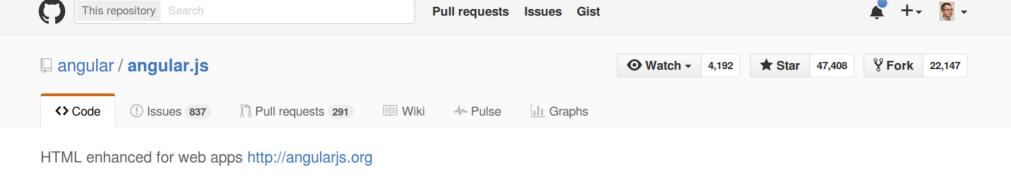
## **Forge Support for #2 Explain Project**

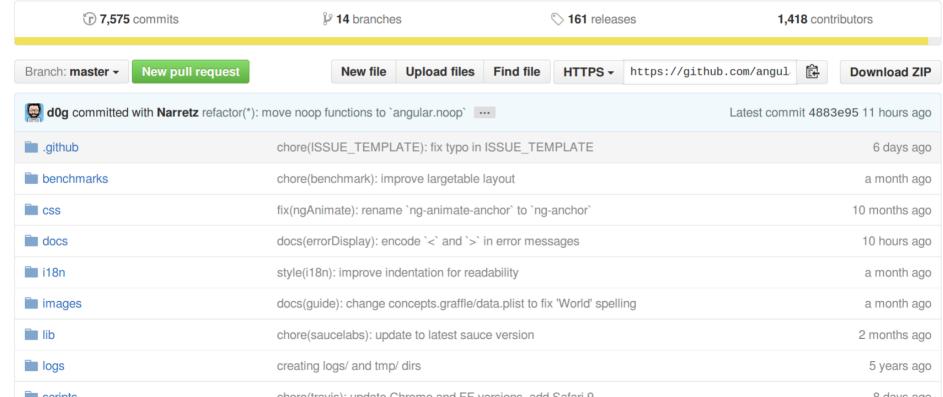
- Provide summary
  - Project home page
- Provide documentation
  - Wikis and documentation download
- Provide communication
  - Forums and mailing lists



#### Forge Support for #3 Engage with Volunteer

- Provide installable download
- Provide open forums and mailing lists
- Provide all relevant tools open accessible





### **Forge Support for #4 Work with Contributor**

- Support email updates, notifications
- Support forge persona, reputation building, kudos, etc.

#### **Improves Code Quality**

- Quality of open source project improves, because
  - There is less redundant, more shared development, because
    - All projects are findable, co-located, never deleted

#### **Shares Best Practices**

- Projects get better faster, because
  - Co-location and spill-over help knowledge sharing

#### **Distributed Version Control**

- git and hg changed how we develop software
- Decoupling of efforts ("distributed") speeds up development

### **Review / Summary of Session**

- Open source tool innovation
  - Software forges
  - Distributed version control
- Software forges help
  - The community process
  - Improve code quality
  - Share best practices
- Distributed version control
  - Speeds up development

# Thank you! Questions?

dirk.riehle@fau.de – http://osr.cs.fau.de

dirk@riehle.org – http://dirkriehle.com – @dirkriehle

#### **Credits and License**

- Original version
  - © 2012-2019 Dirk Riehle, all rights reserved
- Contributions

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