Software Developers’ Information Needs

Bachelor Project of Jonas Richner supervised by Pooja Rani
Research Questions

**RQ₁**: How do researchers quantify software developers’ information needs?

**RQ₂**: Which information needs are important for developers to make progress, and useful for the development of tools and practices?
Systematic Literature Review

Systematic Search

Inclusion and Exclusion Criteria
Number of Studies over Time

- 1987: 1 study
- 1988: 1 study
- 1989: 1 study
- 1990: 1 study
- 1991: 2 studies
- 1992: 2 studies
- 1993: 2 studies
- 1994: 2 studies
- 1995: 6 studies
- 1996: 6 studies
- 1997: 9 studies
- 1998: 6 studies
- 2000: 4 studies
- 2001: 4 studies
- 2002: 4 studies
- 2003: 5 studies
- 2004: 4 studies
- 2005: 4 studies
- 2006: 4 studies
- 2007: 4 studies
- 2008: 4 studies
- 2009: 4 studies
- 2010: 9 studies
- 2011: 6 studies
- 2012: 6 studies
- 2013: 4 studies
- 2014: 4 studies
- 2015: 3 studies
- 2016: 3 studies
- 2017: 3 studies
- 2018: 3 studies
People-centric and Technology-centric Studies

- People-centric: 35
- Technology-centric: 25
People-centric Methods

- Survey: 20
- Observation: 17
- Interview: 13
- Other Methods: 4
People-centric and Technology-centric Studies

People-centric: 35
Technology-centric: 25
Technology-centric Data Sources

- StackOverflow: 19
- Mailing Lists: 4
- Other: 3
Discussion of RQ$_1$

- Is measuring frequency enough?
- How closely do surveys match with reality?
- Is studying Stack Overflow worth it?
Second Research Question

**RQ2**: Which information needs are important for developers to make progress, and useful for the development of tools and practices?
Results

- Rationale
- Awareness
- Implications of a code change
Is research on new tools more beneficial at helping developers than research on new practices that enable them to choose, learn, and share more effective strategies?