

# Research Software Engineers

## Australian Results of the 2018 Survey

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# Background

In 2018, the **RSE-AUNZ** association participated in an international survey <sup>[1]</sup> organized by the Software Sustainability Institute in the UK, with questions tailored for AU and NZ contexts <sup>[2]</sup>.

“The purpose of this survey is to collect information about people who develop the software that is used in research.”

“We call these people Research Software Engineers (RSEs)<sup>[2]</sup>, but they exist under many job titles (from postdoctoral researcher to applications consultant, to bioinformatician).”

1. Phillippe et. al. (2019), ‘softwaresaved/international-survey: Public release for 2018 results’, <http://doi.org/10.5281/zenodo.2585783>
2. by Nooriyah Poonawala Lohani (NeSI), Manodeep Sinha (Swinburne University of Technology), and Nicholas May (RMIT University).
3. <https://www.software.ac.uk/blog/2016-11-17-not-so-brief-history-research-software-engineers>

# Results Overview

## Background

- Level and Discipline of Education
- Software Engineering Experience
- Learning RSE Skills

## Current Role

- Employment
- Role
- Work
- Tools

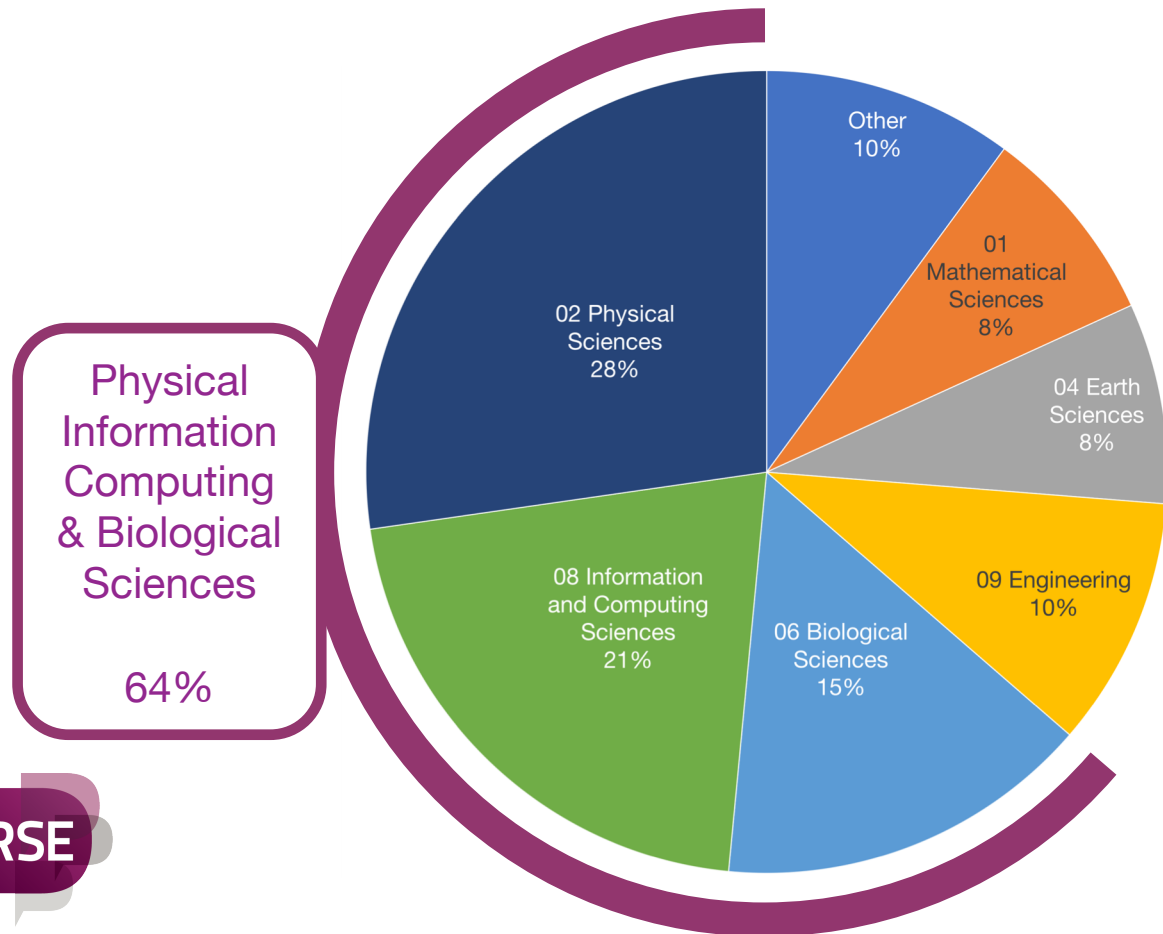
## Future

- Skills to Improve
- Time Spent – Actual vs Desired
- RSE Association & Conference

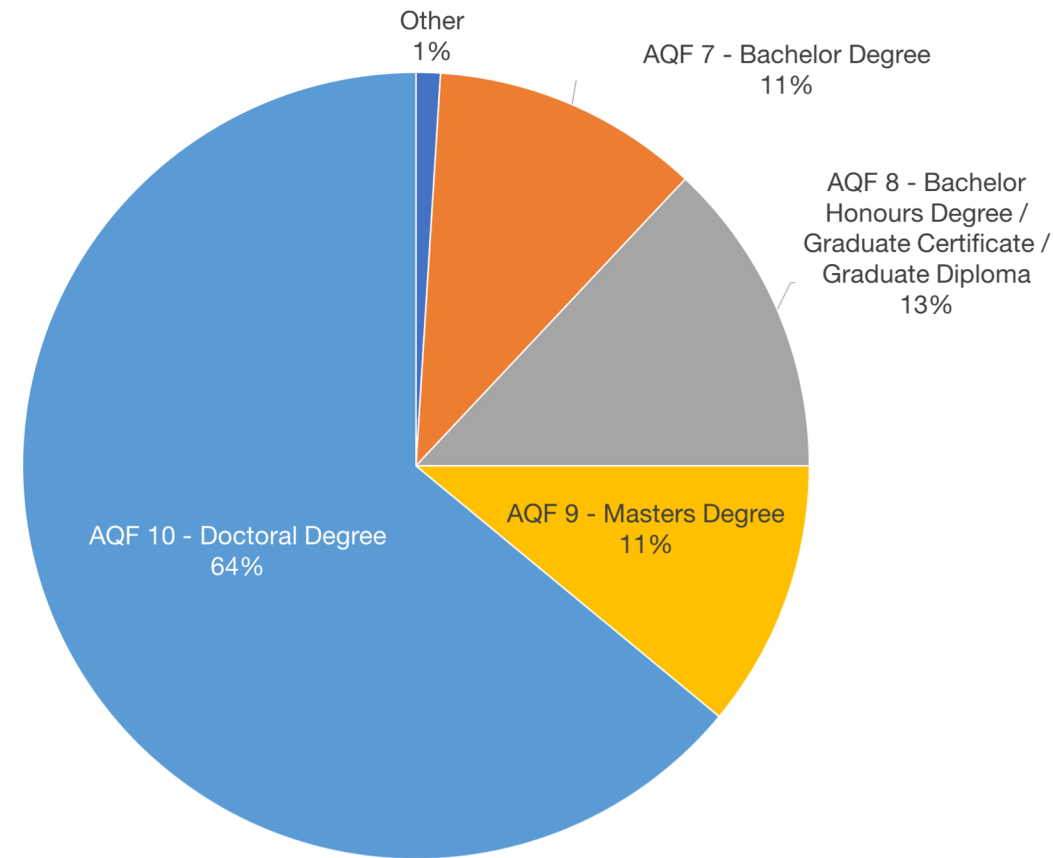
99 of the survey participants were from Australia

# Background - Education

What is the discipline of your highest academic qualification?



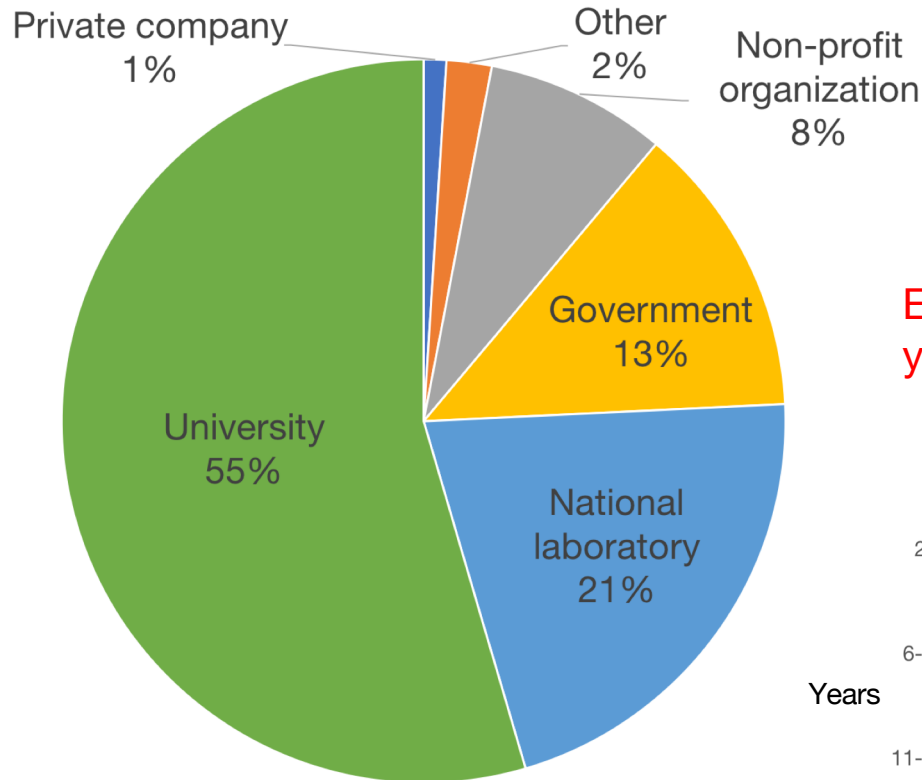
What is the highest level of education you have attained?





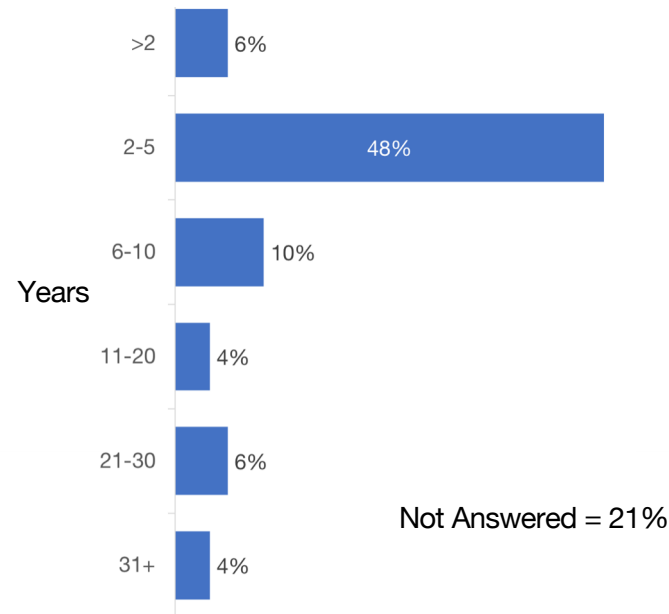
# Current Role - Employment

Type of current employer organization?

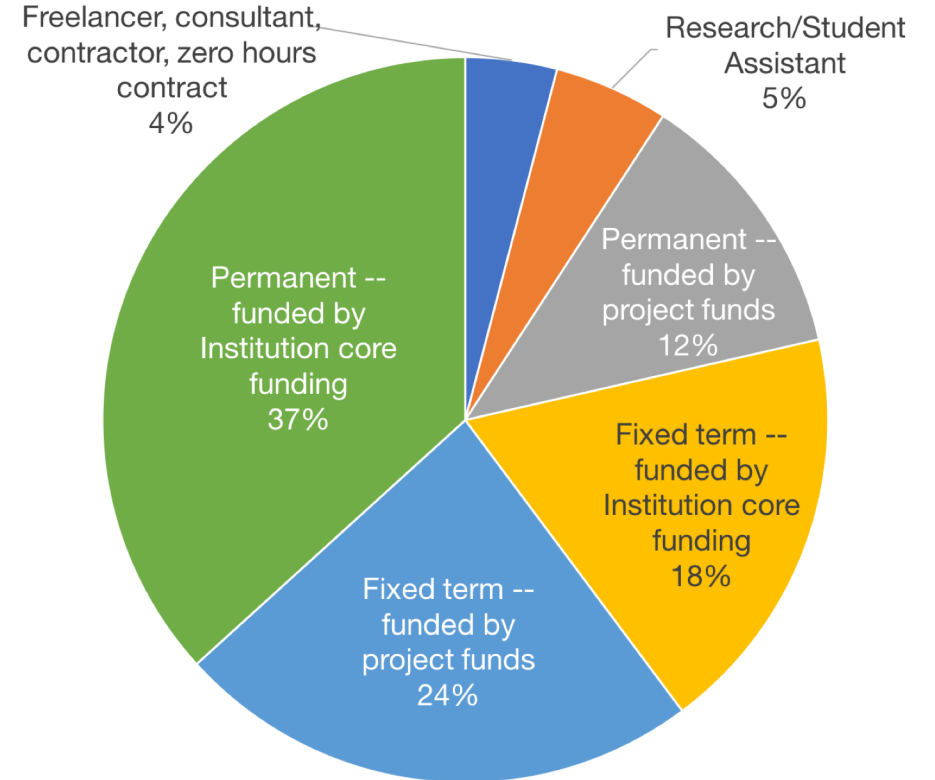


**Work full time: 94%**

Expected duration of your current position?

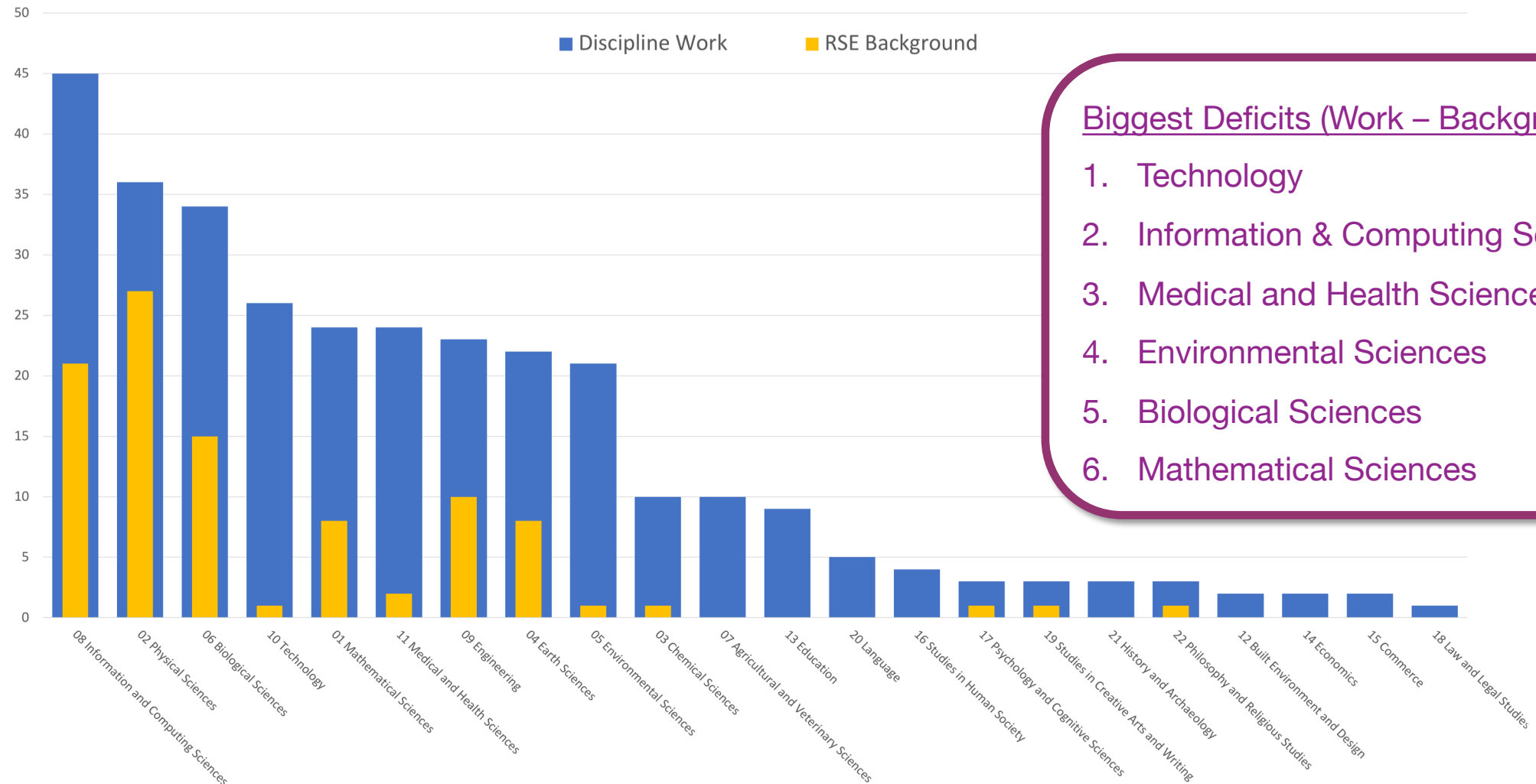


What is the nature of your current employment?



# Current Role – Work: Disciplines

The background disciplines of RSEs and the disciplines in which they work?

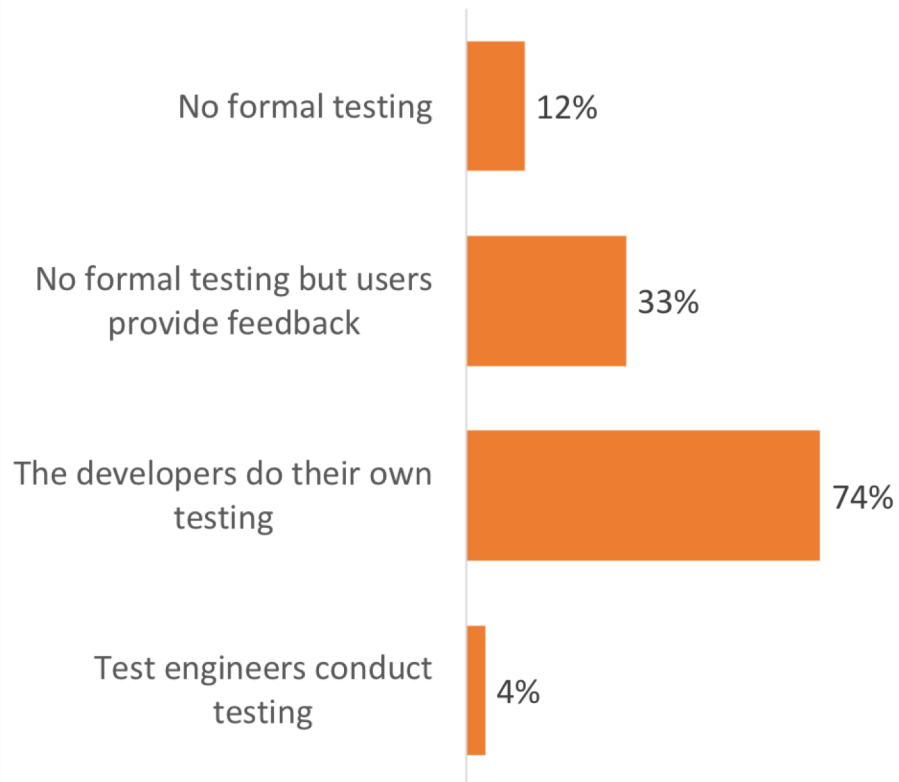


## Biggest Deficits (Work – Background)

1. Technology
2. Information & Computing Sciences
3. Medical and Health Sciences
4. Environmental Sciences
5. Biological Sciences
6. Mathematical Sciences

# Current Role – Work: Testing & Training

How are your projects typically tested?



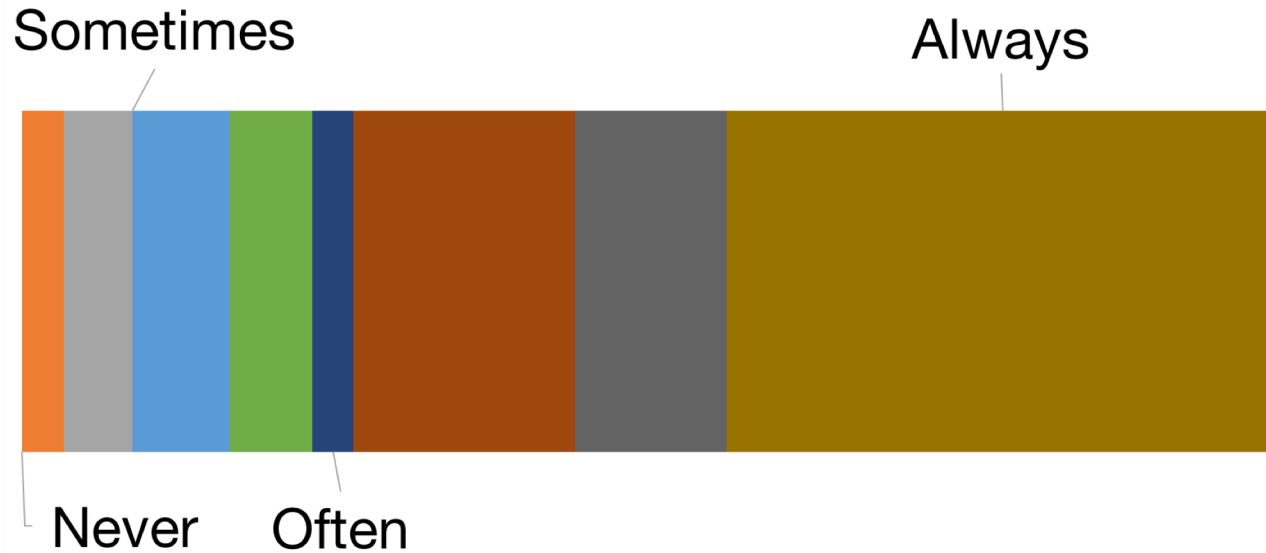
How do you get RSE training?





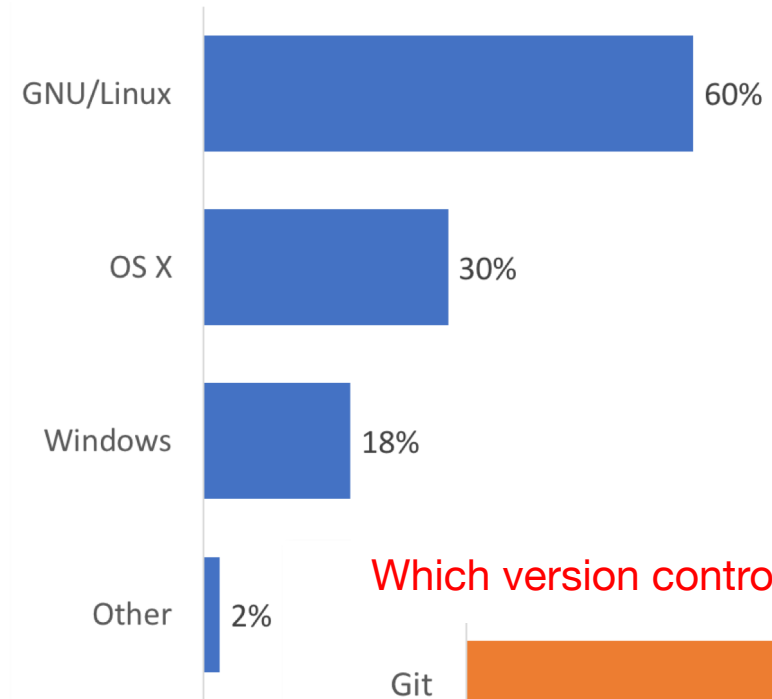
# Current Role - Tools

How often do you use open source software?

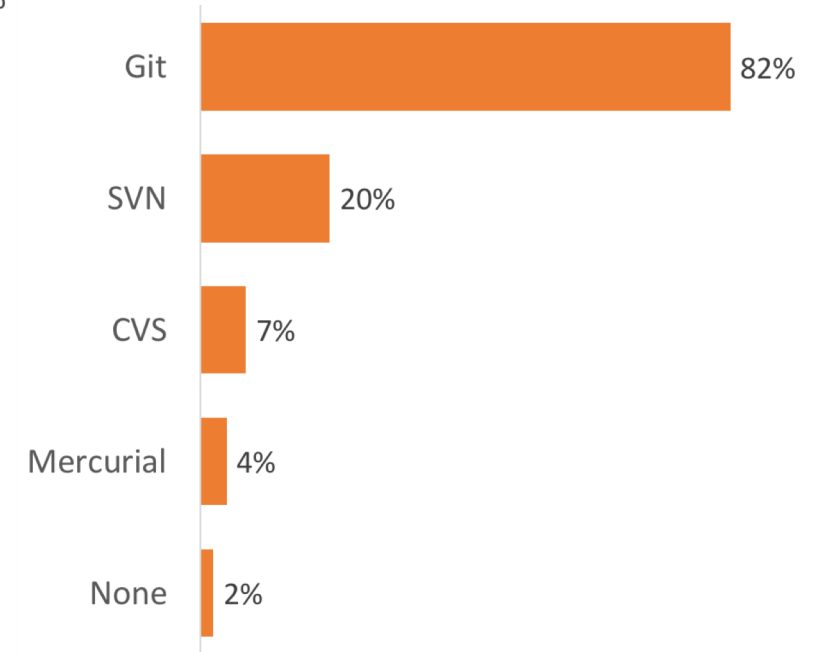


Open Source - Often to Always:  
**70%**

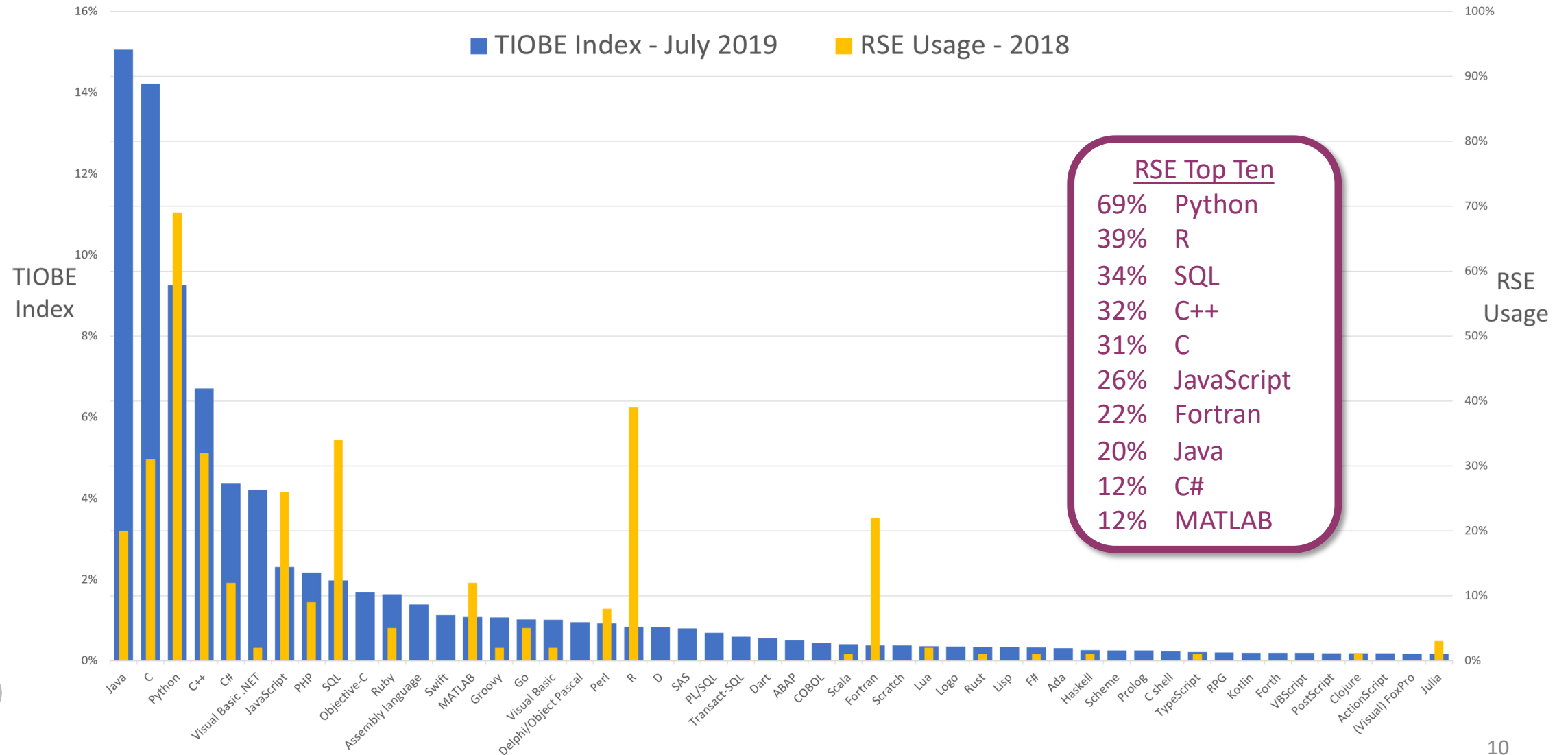
Which operating systems do you use?



Which version controls do you use?



# Current Role – Tools: Languages



# Future - Skills

Which RSE skills do you want to improve?



## Top Skills to Improve

1. Project & Management
2. Software Testing
3. Software Design
4. Machine Learning
5. Kubernetes

# Future – RSE Association

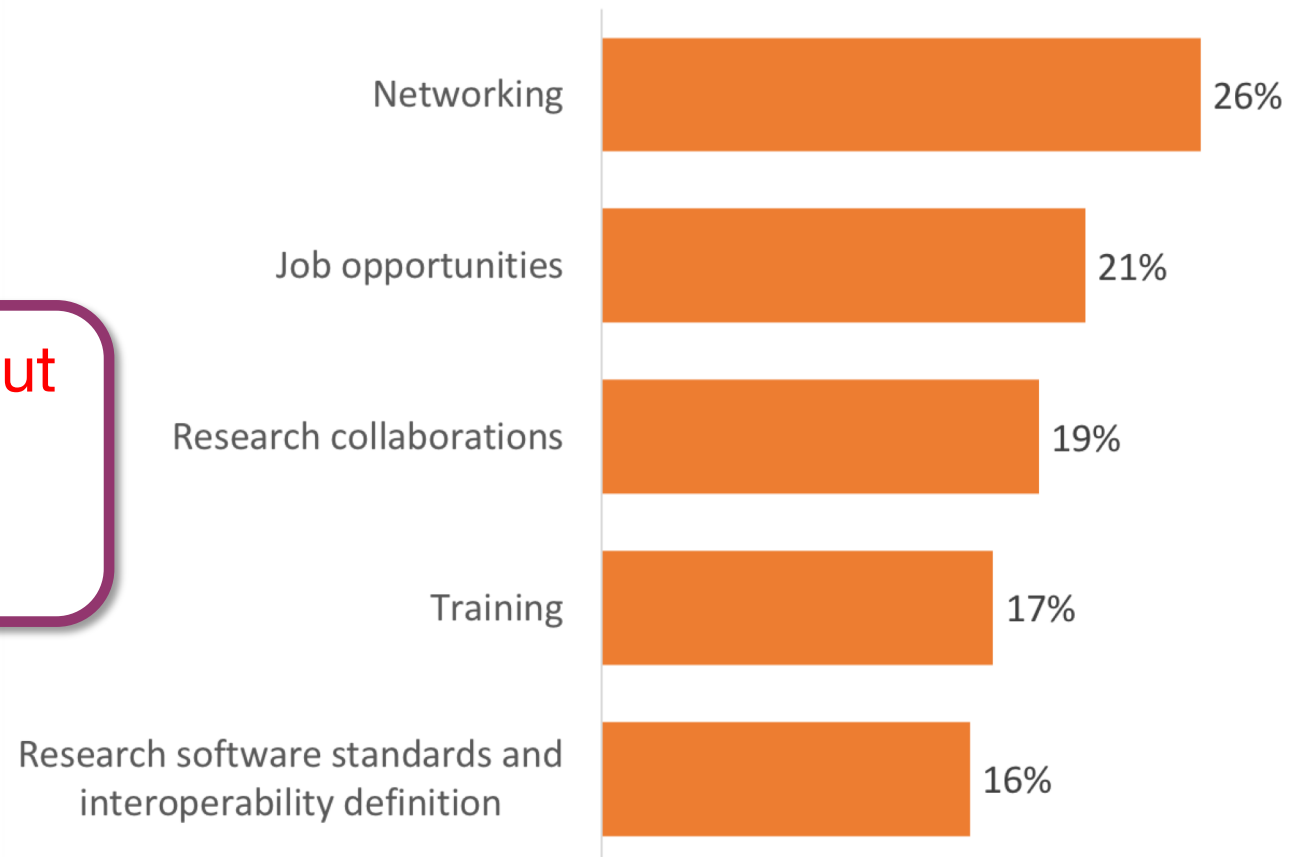
Are a member of an  
RSE association:

**12%**

Would like to attend a conference about  
software development in academia:

**57%**

What would you hope to get out of an RSE association?



# Thank you

## Questions?

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