

A scavenger approach to building tools to support your research

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Preamble

- In my research, tools are not a deliverable
- They are the means to do my research

Lesson #1: SQL

- Use a database at the core of your tools

Lesson #2: Reuse

- Regularly scan sourceforge and open source package repositories for tools
- Use tools/components from other research groups and companies

Lesson #3: Perl

- Use a scripting language to “glue” tools together

Lesson #4: Students

- It is challenging to get students to collaborate on developing tools

Lesson #5: DIY

- You need to be able to maintain and evolve your tool

Lesson #6: Lab book

- Keep notes of your tool usage/experiments

Lesson #7: Reproduction

- Backup the enviroment and data

Lesson #8: Agree on a license

- We use the GPL

Corollary

- Writing tools is difficult
 - we now that!
- Expensive!
 - either in time or money
- Data more important than tools
 - In our case, data gets the papers (with one exception)