Software Carpentry: Teaching basic lab skills for research computing

(or, an investment in tomorrow's sanity)

Nick Waters

October 13, 2017

How can scientific programming help your work?

- automation $\rightarrow$ reproducibility

How can scientific programming help your work?

- automation $\rightarrow$ reproducibility
- Do more in less time (BLAST, CLUSTAL, etc.)

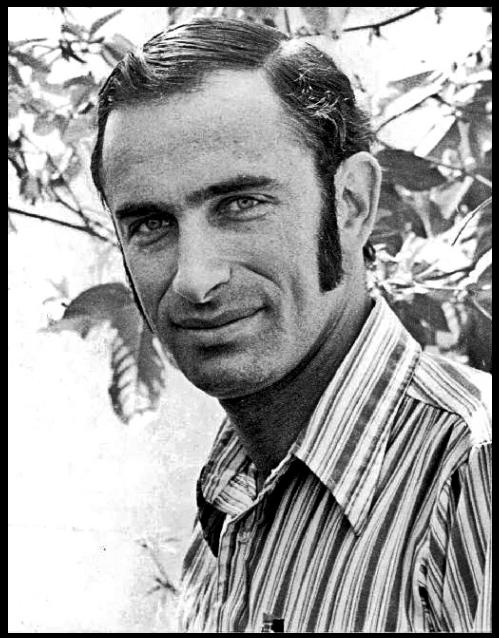
How can scientific programming help your work?

- automation $\rightarrow$ reproducibility
- Do more in less time (BLAST, CLUSTAL, etc.)
- Automate repetitive tasks

How can scientific programming help your work?

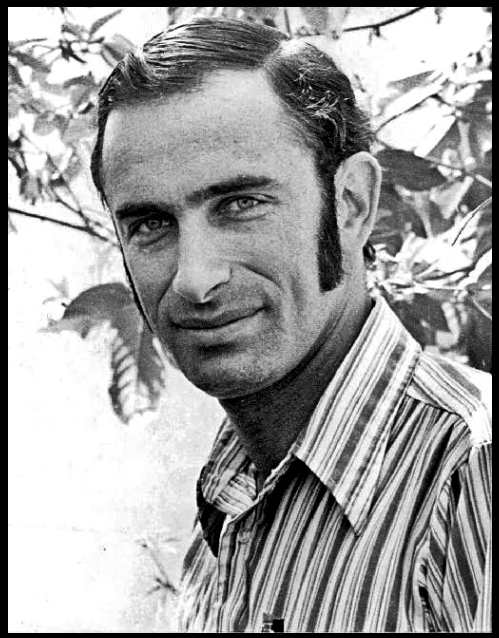
- automation $\rightarrow$ reproducibility
- Do more in less time (BLAST, CLUSTAL, etc.)
- Automate repetitive tasks
- Analyze NGS data

attrib. Dr. Paul Ehrlich



attrib. Dr. Paul Ehrlich

- To err is human, but to really foul things up you need a computer.



Results of lack of training

- Getting tricked by software

Results of lack of training

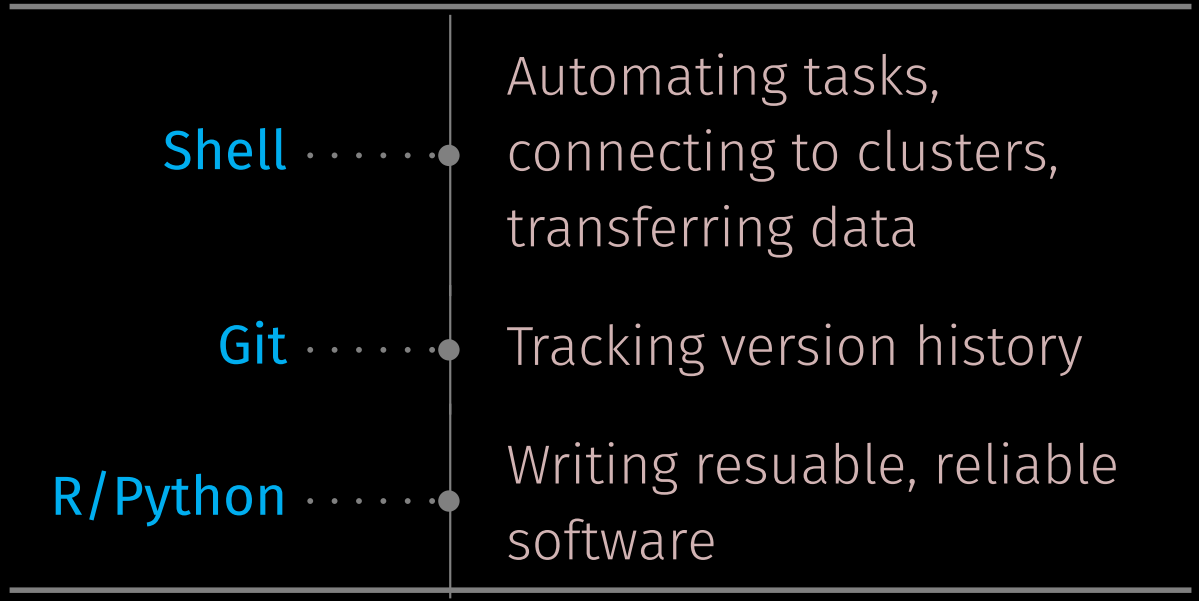
- Getting tricked by software
- Missing or unusable electronic lab notebooks

What is Software Carpentry?

Since 1998, Software Carpentry has been teaching researchers the computing skills they need to get more done in less time and with less pain

What is Software Carpentry?

Since 1998, Software Carpentry has been teaching researchers the computing skills they need to get more done in less time and with less pain



Bringing SWC to NUIG

Cost: €500 fee + travel and expenses for instructor, and catering

Bringing SWC to NUIG

Cost: €500 fee + travel and expenses for instructor, and catering

How can you help?

Bringing SWC to NUIG

Cost: €500 fee + travel and expenses for instructor, and catering

How can you help?

- Encourage lab members to attend
- Help cover cost of instructor travel

Benefits

Benefits

- Average time saved: $\frac{1}{2}$ to 1 day **per week**

Benefits

- Average time saved: $\frac{1}{2}$ to 1 day **per week**

questions?

Resources

- Is your Research Sofware Correct?
- Zeimann et al's Excel gene name paper