

**EXPLORING SOFTWARE CITATION
AT
THE NATIONAL LIBRARY OF MEDICINE**

with Alex Sticco Kelly

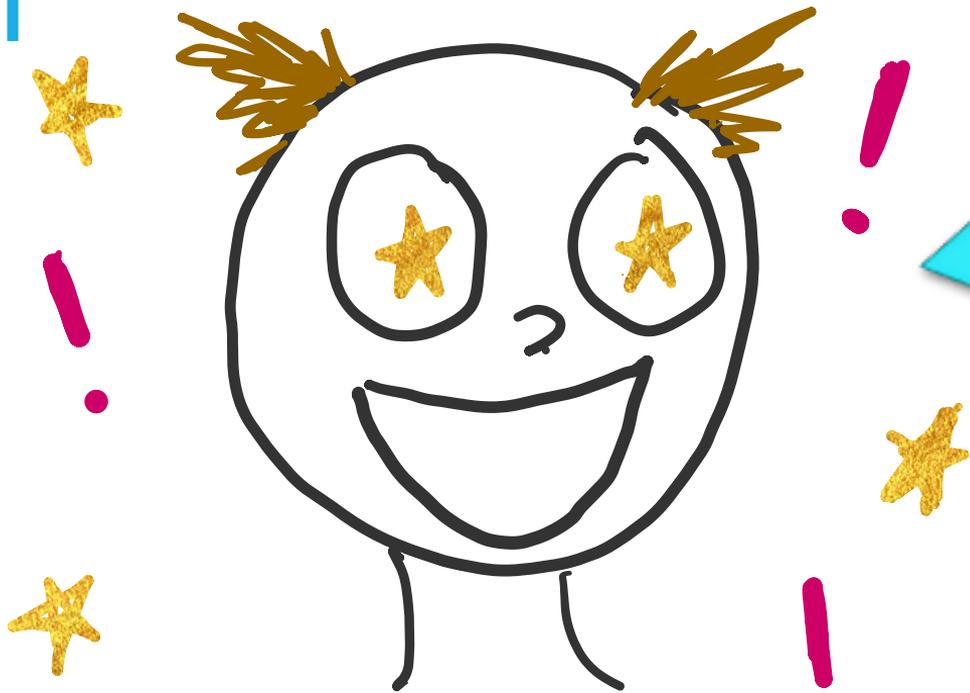
THE ORIGIN OF THIS PROJECT



We need someplace we can list and search the software projects that are produced by our hackathons.



THE ORIGIN OF THIS PROJECT



We need someplace
we can list and search

**ALL THE
BIOMEDICAL
SOFTWARE!**

Like PubMed!

But for code!

PUBCODE



NIH

U.S. National Library of Medicine



Virtual Machine Builder

Full Project

RESOURCE

Publicly Accessible Repository 
[https://github.com/csd-dev-
tools/VmBuilder](https://github.com/csd-dev-tools/VmBuilder)

DOI: 10.11578/dc.20171025.1946

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Export Metadata 



Abstract

Virtual Machine Builder is a graphical user interface for use and modification of virtual machine templates using Hashi Corp packer to perform virtual machine creation.

Developers:

[Nielsen, Roy ^{\[1\]}](#)

[+ Show Author Affiliations](#)

Release Date:

2017-04-26

Project Type:

Open Source, Publicly Available Repository

Software Type

Scientific

Licenses:

GNU General Public License v2.0

Licenses:	GNU General Public License v2.0
Sponsoring Organizations:	USDOE
	Primary Award/Contract Number: AC52-06NA25396
Code ID:	5289
Site Accession Number:	7476
Research Organizations:	Los Alamos National Laboratory (LANL), Los Alamos, NM (United States)
Country of Origin:	United States

Citation Formats

[MLA](#)

[APA](#)

[Chicago](#)

[BibTex](#)

Nielsen, Roy. *Virtual Machine Builder*. Computer Software. <https://github.com/csd-dev-tools/VmBuilder>. USDOE. 26 Apr. 2017. Web. doi:10.11578/dc.20171025.1946.

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No way. Needs
more research.



SOME RELEVANT NLM PRODUCTS

MEDLINE: NLM's selected journal citation database.

- Journals are approved by LSTRC
- Articles are curated by indexers to add subject headings and other information

PubMed: NLM's expanded journal citation database, plus user interface

- Contains all of MEDLINE, plus additional citations

PubMed Central (PMC): NLM's archive of open-access, full-text articles

- participating MEDLINE journals
- non-MEDLINE journals approved by a PMC review board
- all NIH-funded articles must be deposited here



POSSIBLE AREAS OF INFLUENCE

- ❖ Encouraging best practices in software citation
 - Enabling explicit software citations in Pubmed and PMC XML
 - Encouraging software citation policy adoption
 - Encouraging software paper publishing?

- ❖ Facilitating software tracking and reporting for grants
 - Issuing an ID/ID set
 - Interface with reporting systems



ENCOURAGING BEST PRACTICES IN SOFTWARE CITATION

- ❖ Enabling explicit software citations
 - Waiting on JATS4R recommendation
 - It will still be up to the publisher to correctly tag this information

WORKING WITH JOURNALS ON EDITORIAL POLICY

- ❖ Encouraging software citation policy adoption
 - Editors are waiting to hear what we all endorse
 - Cite both the paper and the software?
- ❖ Encouraging software paper publishing?
 - Would we further entrench the “bad” indirect way to cite software?
 - Will this be a short-lived work-around that just creates more confusion later?

FACILITATING BETTER, EASIER SOFTWARE REPORTING

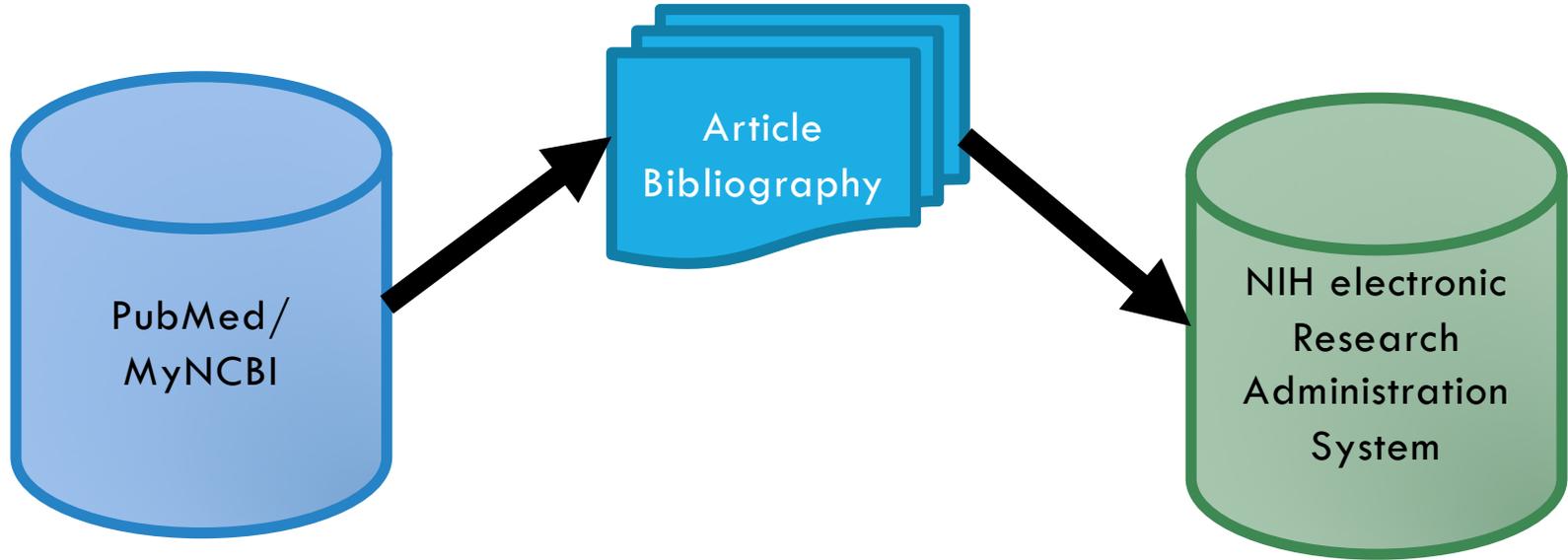
❖ Current NIH Grant Reporting for Software

- Free text for “other outputs”
- Signaled to be of little importance relative to articles

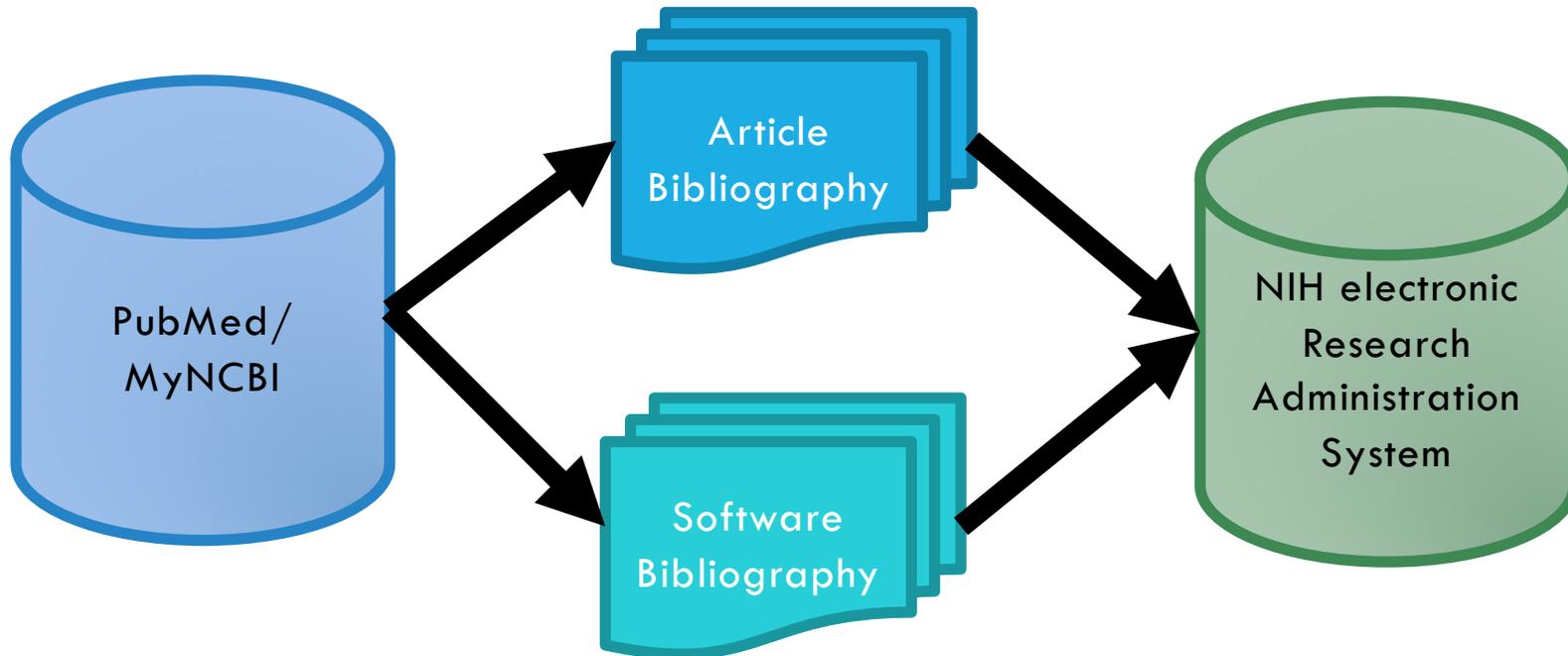
❖ Better Reporting

- Collecting software metadata to accompany software articles
- Interface with reporting systems to submit software bibliographies

REPORTING WORKFLOW



REPORTING WORKFLOW



GEDAE-LaB: A Free Software to Calculate the Energy System Contributions during Exercise

Rômulo Bertuzzi,^{1,*} Jorge Melegati,³ Salomão Bueno,¹ Thaysa Ghiarone,² Leonardo A. Pasqua,¹ Arthur Fernandes Gáspari,¹ Adriano E. Lima-Silva,² and Alfredo Goldman³

Jonathan Peterson, Editor

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Abstract

Go to:

Purpose

Go to:

The aim of the current study is to describe the functionality of free software developed for energy system contributions and energy expenditure calculation during exercise, namely GEDAE-LaB.

Methods

Go to:

Eleven participants performed the following tests: 1) a maximal cycling incremental test to measure the ventilatory threshold and maximal oxygen uptake ($\dot{V}O_{2\max}$); 2) a cycling workload constant test at moderate domain (90% ventilatory threshold); 3) a cycling workload constant test at severe domain (110% $\dot{V}O_{2\max}$). Oxygen uptake and plasma lactate were measured during the tests. The contributions of the aerobic (A_{MET}), anaerobic lactic (LA_{MET}), and anaerobic alactic (AL_{MET}) systems were calculated based

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Oxygen deficit and slow oxygen deficit during intermittent and continuous e

Energy system contributions

Quantifying the immediate re

resistance training.

Cited by other articles in

Validity and Reliability of the
Power and Capacity Assessm

Anaerobic metabolism induc
during exercise with blood flo

MINIMUM USEFUL METADATA

Grant Number: R01 blahblahblah

PMIDs:

4003893

* 5387929

* 6326503

7303572



U.S. National Library of Medicine

DISPLAY DATA ON PM/PMC: PROS AND CONS

Pros

- High Visibility
- Could redirect citations from papers to software
- Easier/Cheaper
- PMC willing to experiment

Cons

- Unlikely to display much info
- Versioning may be hard to display
- PubMed reluctant to add things (everyone wants their new thing to be in PubMed)

DISCUSSION

- ❖ Initial responses?
- ❖ What else could NLM do to further the goals of this working group?

