

Winning the Rankings Game: A New, Wonderful, Truly Superior CS Ranking

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Abstract

We present and validate a major improvement, *evenbetterCSrankings*, on the *CSRankings* systems for ranking computer science institutions.

Introduction

Ranking of CS departments is a game we love to hate. Except, of course, when we're #1. The hot ranking scheme these days is *CSRankings.org*, which represents itself as "a metrics-based ranking of top computer science institutions around the world" and therefore, somehow, superior to rankings that use actual thoughtful expert judgment.²

Its supporters claim superiority on the basis of its objectivity and transparency: *CSRankings* does its rankings by counting things, and the way it counts things is public.

However, *CSRankings* also has detractors:

- It simply counts raw, unnormalized numbers of papers ("the #1 website for approximately listing universities by the population of their computer science departments" ³).
- It only counts papers in a few major conferences in each area, selected because of US R1 participation, and is hence "America-first, anti-progressive and anti-interdisciplinary."⁴
- It treats paper counts as a measure of research contributions and discourages collaboration.⁵

A new, demonstrably superior ranking system for computer science institutions

We propose herewith a new ranking scheme, *evenbetterCSrankings*, that preserves objectivity and transparency, addresses the other objections, and, in addition, is superior in efficiency and sustainability.

The *evenbetterCSrankings* algorithm is:

Get a list of universities, for example the US-based list in *CSRankings*⁶, or the top World Universities⁷
Sort the list: first alphabetize by the second letter of each name, then sub-alphabetize by the ninth letter, then the fifth letter.⁸

Voila!

¹ You know, I'm the one who's wandering around with the lantern.

² <https://csrankings.org/>

³ Sigbovik deadline extension email 3/12/21

⁴ <https://cacm.acm.org/blogs/blog-cacm/248078-why-i-dont-recommend-csrankings-org-know-the-values-you-are-ranking-on/fulltext>

⁵ <https://github.com/emeryberger/CSRankings/issues/771>

⁶ *op. cit.* - *CSRankings*

⁷ <https://www.4icu.org/top-universities-world>

⁸ using Excel sort order for convenience

Validation

Obviously, the *evenbetterCSrankings* algorithm is objective, because it's based purely on the text string that represents the University name, and it's transparent because the algorithm is both simple and public.

The *evenbetterCSrankings* algorithm has no bias about the size of the university. It does not consider conferences at all, so it is safe from the algorithmic biases of conference selection.⁹ It does not pretend that any of this has anything to do with quality.

CSRankings.org appears to include only 182 US universities.¹⁰ The *evenbetterCSrankings* list covers the top 200 universities world-wide,¹¹ thereby eliminating the America-first bias.

Finally, *evenbetterCSrankings* does not need to regularly mine databases of papers or citations in order to update the ranking, and it does not need to deal with ambiguity about affiliations of authors. Thus it requires less human and machine effort, and by virtue of its minimal computation it has a much smaller carbon footprint. It also relieves its users of having to check in for ranking changes.

Since *evenbetterCSrankings* meets *CSRankings'* explicit objectives of objectivity and transparency, it does not have many of the shortcomings of *CSRankings*, and it is more efficient, *evenbetterCSrankings* is clearly a better ranking system.

Plus, it ranks my university first.

The Appendix provides the *evenbetterCSrankings* rankings of the top 200 universities world-wide¹².

Conclusion

Since *evenbetterCSrankings* dominates *CSRankings* on all attributes, henceforth all references to *CSRankings.org* should be redirected to *evenbetterCSrankings.org*

This paper must be regarded as a significant contribution to the science of rankings because, you know, it has, like, lots of footnotes.¹³

Appendix: *evenbetterCSrankings* ranking of the top 200 universities world wide

This space left blank not intentionally,
but because of a ~~bug~~ documented feature in Word --
namely an interaction between
footnotes and switching to 2-column format¹⁴

⁹ such as considering only conferences frequented by folks at US R1 schools

¹⁰ *op. cit.* - *CSRankings*

¹¹ *op. cit.* - Top Universities

¹² *ibid.*

¹³ Nevermind that they're mostly random web links

¹⁴ <https://support.microsoft.com/en-us/topic/section-break-causes-an-unexpected-page-break-in-word-4bc08567-c7ca-72f5-be3e-022996b39dd6>

Carnegie Mellon University	us	Technische Universität München	de
Carleton University	ca	Technische Universität Wien	at
National Taiwan University ¹⁵	tw	Technische Universiteit Delft	nl
National University of Singapore ¹⁶	sg	Georgia Institute of Technology	us
National Research University Higher School of Economics ¹⁷	ru	Tecnológico de Monterrey	mx
Dartmouth College	us	Texas A&M University	us
California Institute of Technology	us	Helsingin yliopisto	fi
California State University, Northridge	us	Temple University	us
Katholieke Universiteit Leuven	be	Peking University	cn
Vanderbilt University	us	Georgia State University	us
San Diego State University	us	Penn State University	us
Washington University in St. Louis	us	Western University	ca
Washington State University	us	Georgetown University	us
Massachusetts Institute of Technology	us	Shanghai Jiao Tong University	cn
Nanyang Technological University	sg	Zhejiang University	cn
Harvard University	us	The Ohio State University	us
Yale University	us	Shenzhen University	cn
McMaster University	ca	The Chinese University of Hong Kong	hk
École Polytechnique Fédérale de Lausanne	ch	The University of Texas at Austin	us
McGill University	ca	The University of British Columbia	ca
New York University	us	The University of Arizona	us
George Mason University	us	The University of Utah	us
George Washington University	us	The University of Edinburgh	gb
Heriot-Watt University	gb	The University of Sydney	au
Newcastle University	gb	The University of Melbourne	au
		The University of Manchester	gb
		The University of New South Wales	au
		The University of Tokyo	jp
		The University of Queensland	au
		The University of Hong Kong	hk
		The University of Warwick	gb
		The University of Tennessee, Knoxville	us
		The University of Nottingham	gb
		The University of Alabama	us
		The University of Oklahoma	us
		The University of York	gb
		Rheinisch-Westfälische Technische Hochschule Aachen	de
		The London School of Economics and Political Science	gb
		Michigan State University	us
		Virginia Polytechnic Institute and State University	us
		Simon Fraser University	ca
		Xi'an Jiaotong University	cn
		King Saud University	sa

¹⁵ More properly, 國立臺灣大學. The algorithm is, unfortunately, structurally biased toward alphabetic (segmental) languages, to the disadvantage of logographic and syllabic languages, because of its reliance on the concept of “nth letter” and Excel sort order. The data source has romanized the names, and the current version of the algorithm relies on that data. The author acknowledges with regret the legacy of colonialism inherent in this representation. *evenbetterCSrankings* still dominates *CSRankings*, of course, because the latter algorithm relies on venues published not merely in alphabetic languages, but in English.

¹⁶ More properly, *Universiti Nasional Singapura*, 新加坡国立大学, and சிங்கப்பூர் தேசிய பல்கலைக்கழகம்; providing the opportunity for different rankings depending on language selection.

¹⁷ More properly, Национальный исследовательский университет «Высшая школа экономики». If the data source had not Romanized this, the algorithm would have had no problem with it, as Excel can sort Cyrillic just fine.

Jinan University	cn	University of Kentucky	us
William Marsh Rice University	us	Université de Montréal	ca
King's College London	gb	University of Cincinnati	us
Eidgenössische Technische Hochschule Zürich	ch	University of Cambridge	gb
Florida International University	us	University of California, Berkeley	us
Florida State University	us	University of California, Los Angeles	us
Imperial College London	gb	University of Illinois at Urbana-Champaign	us
Emory University	us	University of California, San Diego	us
Universidade de São Paulo	br	University of California, Irvine	us
Universidad Nacional Autónoma de México	mx	University of California, Davis	us
Universidad Complutense de Madrid	es	University of Colorado Boulder	us
Universidad de Chile	cl	University of California, Santa Barbara	us
Universidad de Barcelona	es	University of Delaware	us
Universidad de La Rioja	es	University of Illinois at Chicago	us
Universidad de Valencia	es	University of California, Riverside	us
University of Iowa	us	University of California, Santa Cruz	us
University of New Mexico	us	University of California, San Francisco	us
University of Liverpool	gb	University of Calgary	ca
University of Southern California	us	University of Chicago	us
University of South Florida	us	University of Science and Technology of China	cn
University of Houston	us	University College London	gb
University of Southampton	gb	University of Oxford	gb
University of South Carolina	us	University at Buffalo, State University of New York	us
University of Pittsburgh	us	Université de Liège	be
University of Waterloo	ca	University of Oregon	us
University of Notre Dame	us	Universiteit Utrecht	nl
University of Washington	us	University of Leeds	gb
University of Wisconsin-Madison	us	Universiteit Leiden	nl
University of Massachusetts Amherst	us	University of Michigan	us
University of Missouri	us	University of Rochester	us
University of Toronto	ca	University of Victoria	ca
University of North Carolina at Chapel Hill	us	Universität Zürich	ch
University of Maryland	us	University of Auckland	nz
University of Virginia	us	University of Nebraska-Lincoln	us
Université de Strasbourg	fr	University of Alberta	ca
Université de Lorraine	fr	University of Glasgow	gb
University of Birmingham	gb	University of Miami	us
University of Florida	us	Universität Wien	at
University of Georgia	us	Universiteit van Amsterdam	nl
Universitetet i Oslo	no	Université Laval	ca
Université Clermont Auvergne	fr	Indiana University Bloomington	us
University of Minnesota-Twin Cities	us	Anadolu Üniversitesi	tr
University of Pennsylvania	us	Columbia University in the City of New York	us
University of Central Florida	us	Colorado State University	us
University of Connecticut	us	Concordia University	ca
University of Kansas	us		

Louisiana State University	us
Boston University	us
Monash University	au
Boston College	us
Johns Hopkins University	us
Rochester Institute of Technology	us
North Carolina State University	us
Iowa State University	us
Northwestern University	us
Northeastern University	us
Moscow State University	ru
Cornell University	us
York University	ca
Københavns Universitet	dk
Uppsala Universitet	se
Freie Universität Berlin	de
Brown University	us
Princeton University	us
Drexel University	us
Arizona State University	us
Oregon State University	us
Brigham Young University	us
Tsinghua University	cn
Stanford University	us
Ruprecht-Karls-Universität Heidelberg	de
Rutgers, The State University of New Jersey	us
Kungliga Tekniska högskolan	se
Ludwig-Maximilians-Universität München	de
Australian National University	au
Hunan University	cn
Lunds Universitet	se
Tufts University	us
Purdue University	us
Sun Yat-Sen University	cn
Guangxi University	cn
Queen's University	ca
Ruhr-Universität Bochum	de
Duke University	us
Syracuse University	us
Kyoto University	jp
Ryerson University	ca