HackerRank

University Tech Talent Report

Report consists of:

1,000,000 certification attempts in **14** skills from students at over **1,000** universities spanning **102** countries.

LANGUAGE SKILLS

What are students' strongest language skills?

We started by evaluating student certification success rates in the languages they test themselves on most frequently. Several of these languages – namely JavaScript, Python, Java and Go – are also among the top language skills companies are looking for.

Language	Python	SQL	JAVA	Java Script	Rest API	Go
Student Ranking	1	2	3	4	5	10
Company Ranking	2		3	1		9
Pass Rate	61%	68%	71%	27%	14%	28%

Python, SQL and Java stay strong; Go goes mainstream: Python is developers' most preferred language in which to earn certifications, and the second most in-demand by companies. JavaScript and Rest API skills are less strong among early talent: Despite its widespread use by companies like Netflix, PayPal and Instagram, there is a palpable dislike of JavaScript in the developer community, and its certification success rate hovers at just 27%. Still, it's the top skill companies are seeking. Meanwhile, companies like Twitter and Slack moving away from REST means developers are less interested in learning it.

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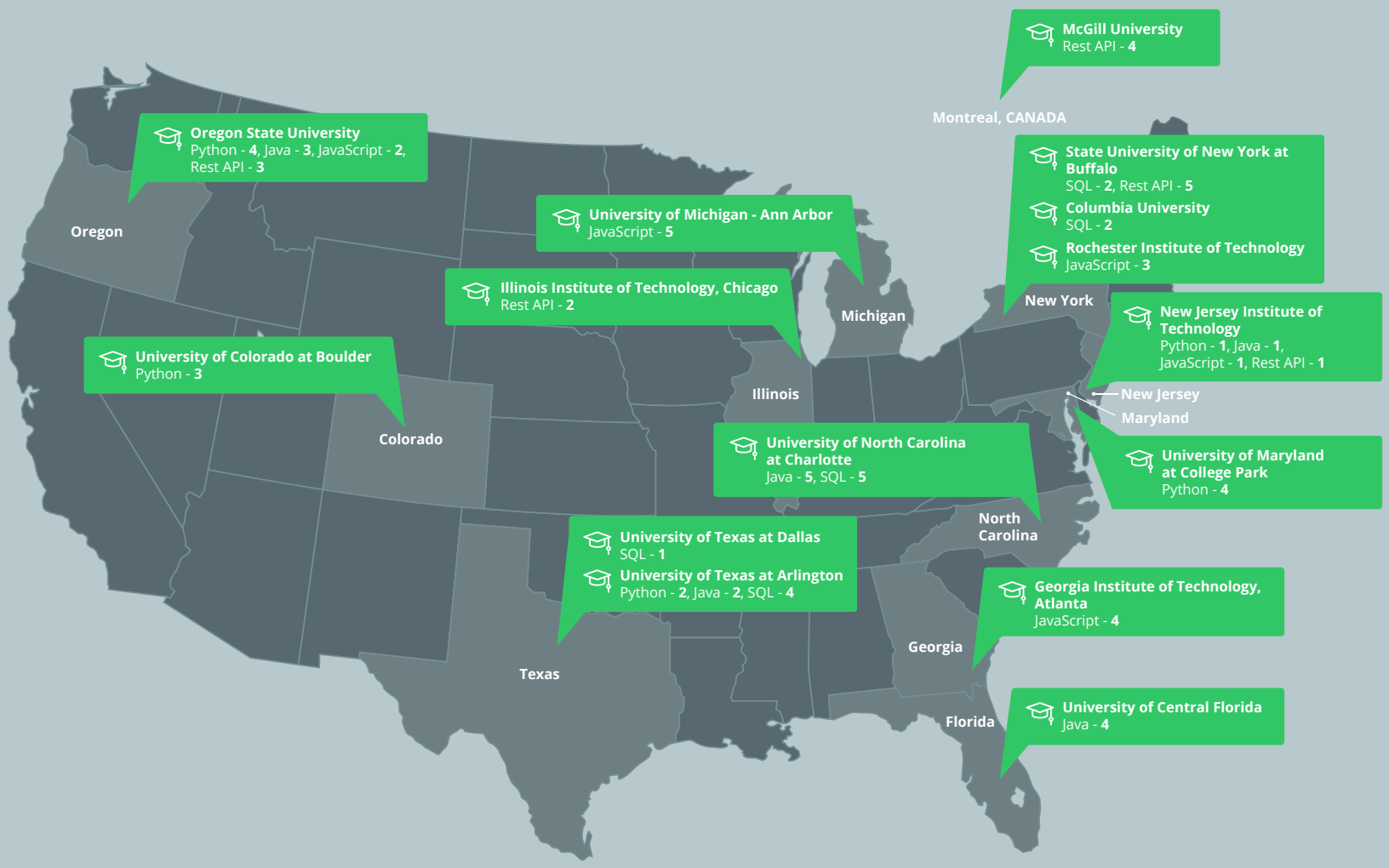
US UNIVERSITIES

In the US, which universities do students with these skills attend?



Technical Talent Is Dispersed Across the U.S.

As more American companies embrace long-term remote or hybrid work, they have their pick of top tech talent across several U.S. regions – and beyond schools with computer science programs that often top academic rankings, like Carnegie Mellon University or MIT. When we examine practical skills, students at New Jersey Institute of Technology top the charts in four out of five languages, while there are pockets of great talent just outside New York City at State University of New York at Buffalo and Rochester. Moving west, top talent emerges at University of Texas at Arlington and Dallas – notable as some companies open new office spaces in Texas. Oregon State University is another standout.

Top Universities in the United States
by technical skill

Rank	Python	Java	JavaScript	SQL	Rest API
1	**New Jersey Institute of Technology** New Jersey	**New Jersey Institute of Technology** New Jersey	**New Jersey Institute of Technology** New Jersey	**University of Texas at Dallas** Texas	**New Jersey Institute of Technology** New Jersey
2	**University of Texas at Arlington** Texas	**University of Texas at Arlington** Texas	**Oregon State University** Oregon	**State University of New York at Buffalo** New York	**Illinois Institute of Technology, Chicago** Illinois
3	**University of Colorado at Boulder** Colorado	**Oregon State University** Oregon	**Rochester Institute of Technology** New York	**Columbia University** New York	**Oregon State University** Oregon
4	**University of Maryland at College Park** Maryland	**University of Central Florida** Florida	**Georgia Institute of Technology, Atlanta** Georgia	**University of Texas at Arlington** Texas	**McGill University** Montreal, Canada
5	**Oregon State University** Oregon	**University of North Carolina at Charlotte** North Carolina	**University of Michigan - Ann Arbor** Michigan	**University of North Carolina at Charlotte** North Carolina	**State University of New York at Buffalo** New York

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ASIA PACIFIC UNIVERSITIES

In the Asia-Pacific region of the world, India has also become a major player in sourcing developers.

In India, University of Mumbai leads skilled tech talent pools for Python, Javascript, and REST API, while PICT has the country's best Java and SQL early talent pools. VIT, Chennai also makes a strong showing across languages. Historically, companies have searched for top tech talent in India only in the IITs, NITs and BITS – especially because hiring managers didn't have the bandwidth to conduct in-person interviews at more universities in such a large talent market. With the emergence of platforms like HackerRank, this challenge is fading. Now, hiring managers can quickly assess candidates' skills remotely.

Top Universities in India
by technical skill

Rank	Python	Java	JavaScript	SQL	Rest API
1	**University of Mumbai** Maharashtra	**PICT, Pune (Pune institute of Computer Technology)** Maharashtra	**University of Mumbai** Maharashtra	**PICT, Pune (Pune institute of Computer Technology)** Maharashtra	**University of Mumbai** Maharashtra
2	**VIT, Chennai (Vellore Institute of Technology)** Tamil Nadu	**VIT, Chennai (Vellore Institute of Technology)** Tamil Nadu	**Anna University** Tamil Nadu	**University of Mumbai** Maharashtra	**Anna University** Tamil Nadu
3	**VIT, Vellore (Vellore Institute of Technology)** Tamil Nadu	**VIT, Vellore (Vellore Institute of Technology)** Tamil Nadu	**MSRIT, Bangalore (MS Ramaiah Institute of Technology)** Karnataka	**MAIT, Delhi (Maharaja Agrasen Institute Of Technology)** Delhi	**VIT, Chennai (Vellore Institute of Technology)** Tamil Nadu
4	**SRM University, Chennai (SRM Institute Of Science & Technology)** Tamil Nadu	**LPU, jalandhar (Lovely Professional University)** Punjab	**Savitribai Phule Pune University (formery University of Pune)** Maharashtra	**KIIT, Bhubaneswar (Kalinga Institute of Industrial Technology)** Odisha	**JIIT, Noida (Jaypee Institute of Information Technology)** Uttar Pradesh
5	**KIET, Ghaziabad (Krishna Institute of Engineering and Technology)** Uttar Pradesh	**University of Mumbai** Maharashtra	**VIT, Chennai (Vellore Institute of Technology)** Tamil Nadu	**VIT, Chennai (Vellore Institute of Technology)** Tamil Nadu	**MSRIT, Bangalore (MS Ramaiah Institute of Technology)** Karnataka

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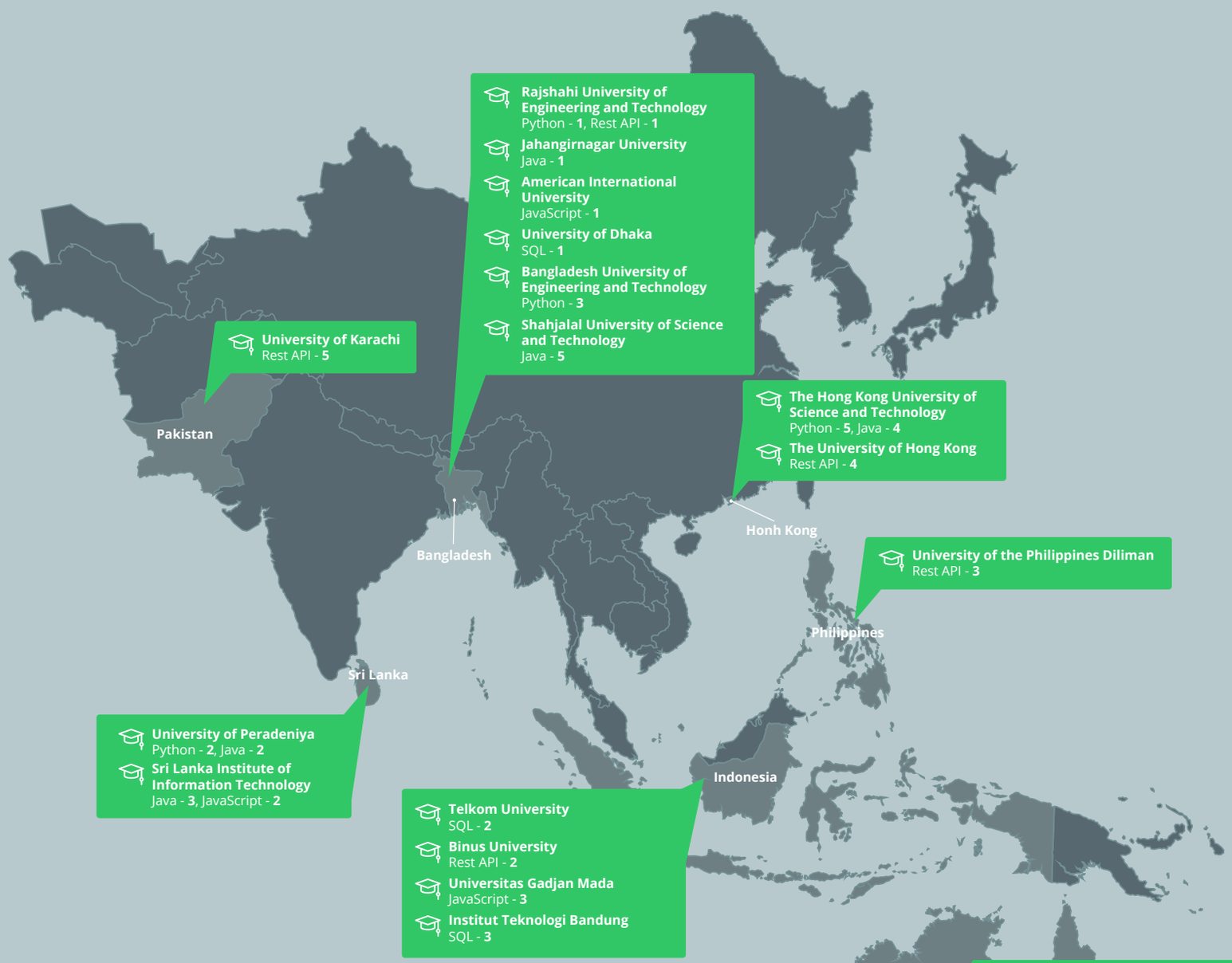
Students in Bangladesh, Indonesia and Sri Lanka Shine

Companies seeking tech talent across other countries in APAC can find highly skilled students in Bangladesh, Indonesia and Sri Lanka, at schools including Rajshahi University of Engineering and Technology, Binus University and University of Peradeniya. Strong tech talent will likely continue to emerge in this region over the coming years: Indonesia is now among the top ten countries with the most billion-dollar startups, while the young labor forces in Bangladesh and Sri Lanka are growing.

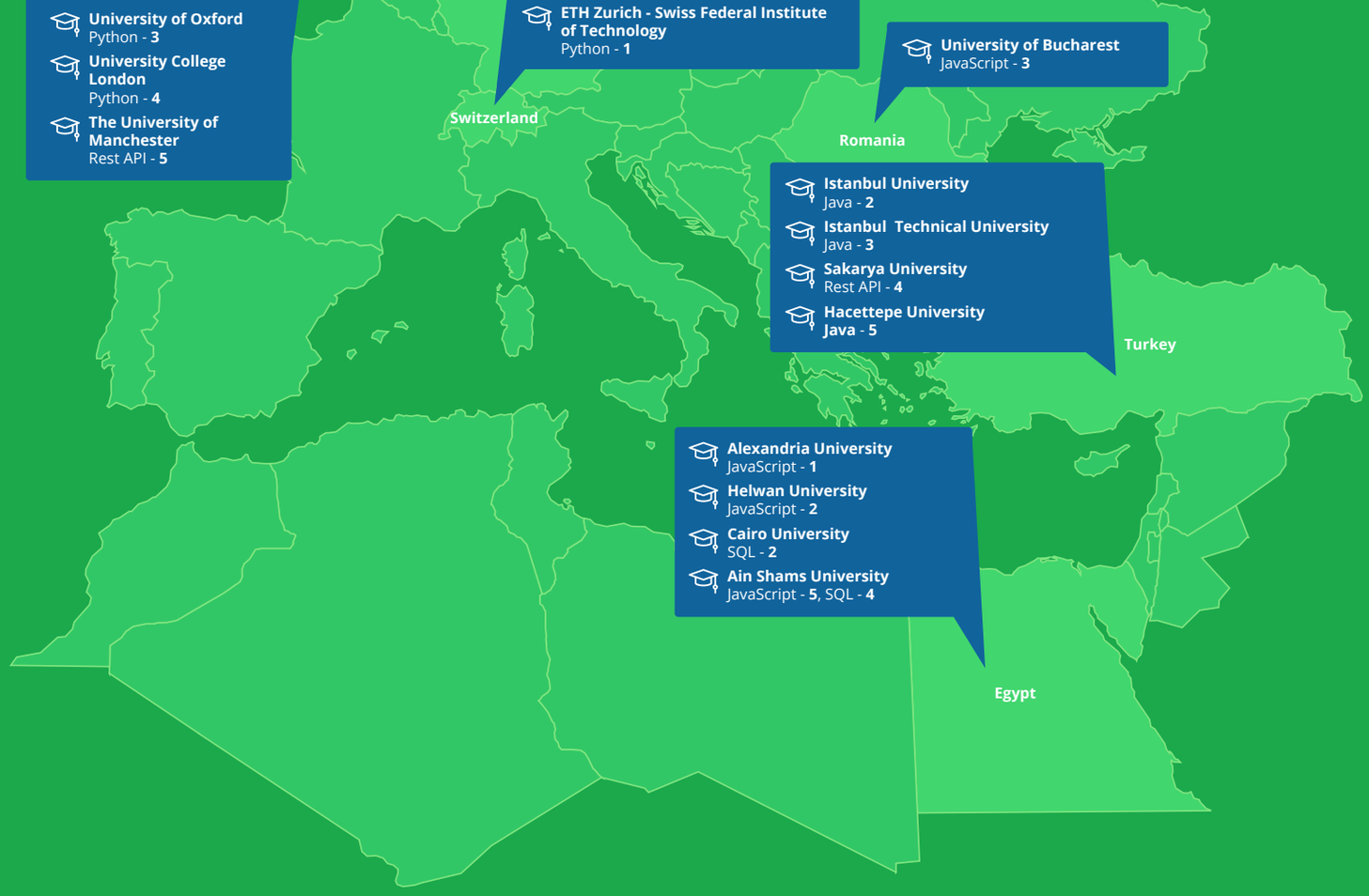
Top Universities in APAC (outside of India)
by technical skill

Rank	Python	Java	JavaScript	SQL	Rest API

1	**Rajshahi University of Engineering and Technology** Bangladesh	**Jahangirnagar University** Bangladesh	**American International University** Bangladesh	**University of Dhaka** Bangladesh	**Rajshahi University of Engineering and Technology** Bangladesh
2	**University of Peradeniya** Sri Lanka	**University of Peradeniya** Sri Lanka	**Sri Lanka Institute of Information Technology** Sri Lanka	**Telkom University** Indonesia	**Binus University** Indonesia
3	**Bangladesh University of Engineering and Technology** Bangladesh	**Sri Lanka Institute of Information Tecgnology** Sri Lanka	**Universitas Gadjan Mada** Indonesia	**Institut Teknologi Bandung** Indonesia	**University of the Philippines Diliman** Philippines
4	**University of Sydney** Australia	**The Hong Kong University of Science and Technology** Honh Kong	**University of Karachi** Pakistan	**University of Melbourne** Australia	**The University of Hong Kong** Honh Kong
5	**The Hong Kong University of Science and Technology** Honh Kong	**Shahjalal University of Science and Technology** Bangladesh	**Binus University** Indonesia	**University of Sydney** Australia	**University of Karachi** Pakistan



EUROPE, MIDDLE EAST & AFRICA UNIVERSITIES



From Ireland to Turkey: University Talent Rises Across EMEA

While traditionally highly-ranked European computer science programs like the University of Oxford and ETH Zurich make appearances, the distribution of early tech talent in Europe is much more widespread than many traditional rankings suggest. Universities in Switzerland, Ireland, Germany and England hold the top honors for students with Python and Rest API skills. For companies looking to expand outside high cost countries, several schools in Egypt, Turkey and Poland offer students with Java and SQL chops.

Top Universities in the EMEA
by technical skill

Rank	Python	Java	JavaScript	SQL	Rest API
1	**ETH Zurich - Swiss Federal Institute of Technology** Switzerland	**Technical University of Munich** Germany	**Alexandria University** Egypt	**University of Warsaw** Poland	**University College Dublin** Ireland
2	**Technical University of Munich** Germany	**Istanbul University** Turkey	**Helwan University** Egypt	**Cairo University** Egypt	**Technical University of Munich** Germany
3	**University of Oxford** England	**Istanbul Technical University** Turkey	**University of Bucharest** Romania	**University College Dublin** Ireland	**ETH Zurich - Swiss Federal Institute of Technology** Switzerland

4	**University College London** England	**AGH University of Science and Technology, Cracow** Poland	**KTH Royal Institute of Technology, Stockholm** Sweden	**Ain Shams University** Egypt	**Sakarya University** Turkey
5	**The University of Edinburgh** Scotland	**Hacettepe University** Turkey	**Ain Shams University** Egypt	**AGH University of Science and Technology, Cracow** Poland	**The University of Manchester** England

These findings build upon our 2019 analysis of university students' skills, showcasing the wealth of global tech talent beyond traditional high-ranking programs. Now more than ever, it's critical for companies to quickly find, attract and hire that talent as they strive to innovate in a digital- and remote-first world.

METHODOLOGY

Between January 2020 and April 2021, HackerRank reviewed more than 1 million certification attempts in 14 skills made by university students. This included 1149 universities from 102 different countries. We included universities with only statistically significant volumes of attempts, including (but not limited to) those like MIT, Stanford University, Harvard University, CalTech and the University of Illinois. From this data, we established a performance-based University ranking for different skills.

Global region definitions:

Americas (AMER): *Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, United States, Uruguay, Venezuela*

Asia-Pacific (APAC): *Afghanistan, Australia, Azerbaijan, Bangladesh, Bhutan, Brunei, Cambodia, China, Fiji, Georgia, India, Indonesia, Japan, Kazakhstan, Kiribati, Kyrgyzstan, Maldives, Malaysia, Mauritania, Mongolia, Myanmar, Nepal, New Zealand, Pakistan, Philippines, Singapore, South Korea, Sri Lanka, Taiwan, Thailand, Turkmenistan, Uzbekistan, Vietnam, Tajikstan*

Europe, Middle East, & Africa (EMEA): *Albania, Algeria, Andorra, Angola, Armenia, Austria, Bahrain, Belarus, Belgium, Benin, Bosnia and Herzegovina, Botswana, Bulgaria, Burkina Faso, Burundi, Cabo Verde, Cameroon, Congo, Croatia, Cyprus, Czech Republic, Denmark, Egypt, Equatorial Guinea, Eritrea, Estonia, Ethiopia, Finland, France, Gabon, Gambia, Germany, Ghana, Greece, Holy See, Hungary, Iceland, Iran, Iraq, Ireland, Israel, Italy, Jordan, Kenya, Kuwait, Latvia, Lebanon, Lesotho, Libya, Lithuania, Luxembourg, Macedonia, Madagascar, Malawi, Malta, Mauritius, Moldova, Montenegro, Morocco, Mozambique, Namibia, Netherlands, Niger, Nigeria, Norway, Oman, Palestine, Poland, Portugal, Qatar, Romania, Russia, Rwanda, San Marino, Saudi Arabia, Serbia, Seychelles, Sierra Leone, Slovakia, Slovenia, Somalia, South Africa, Spain, Sudan, Swaziland, Sweden, Switzerland, Syria, Tanzania, Togo, Tunisia, Turkey, Uganda, Ukraine, United Arab Emirates, United Kingdom, Yemen, Zambia, Zimbabwe, Mali*

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