



GitLab for Education

2020 Program Survey

See the results and discover how
DevOps is transforming education



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GitLab for Education



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Introduction

Since the **GitLab for Education Program's inception in 2018**, we've issued over \$2 billion worth of GitLab's top tier software licenses in more than 75 countries. In 2020 alone, we added 250 institutions and 340K seats. GitLab is strongly committed to providing educational institutions free access to software licenses with the goal of advancing science and teaching DevOps.

We are continually amazed at how our program members use these licenses—from conducting groundbreaking science and reinventing how to teach coding to introducing DevOps to the next generation of the tech workforce. Exemplifying the impact of free access to software is the fact that GitLab appears in the title of over 100 peer-reviewed articles and in the body of over 33,000 peer-reviewed articles. Topics range from studying GitLab's all-remote operating model to pedagogical research using GitLab for measuring student collaboration, applications of continuous integration and continuous development in scientific computing, and GitLab for library science.

During this past year, we engaged with our amazing community through the forum, meetups, coffee chats, and the Customer Reference Program. Through these discussions with our program members, we decided to launch the inaugural GitLab for Education Survey.



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1M

Nearly
1 million
seats across
500+
institutions

Overview

The goal of the GitLab for Education

Program Survey is to better understand not only program members' satisfaction with current offerings but also what the community needs to be successful and bring the DevOps transformation to educational institutions around the world.

This report shares what types of institutions and departments use DevOps and how they implement a DevOps transformation. We also share the challenges the institutions encounter and what they need to be successful. We assessed where DevOps is as a discipline and what stages of the DevOps lifecycle are taught to students. We asked how we can better serve, engage, connect, and enable our members to adopt GitLab.

This report serves as a benchmark for where the program is today and acts as a guide for what the GitLab for Education Program will focus on in 2021 to leverage this momentum and continue to enable the adoption of DevOps in education.

Key findings



INSTITUTION-WIDE ADOPTION

GitLab is used extensively across the entire educational institution. Adoption extends well beyond typical Computer Science departments into many academic disciplines and colleges on campuses, including engineering, natural and social sciences, medical fields, and library science.



MULTI-DISCIPLINARY ADOPTION

GitLab is used for a wide variety of purposes across the institution and generally for more than one primary purpose. Uses include teaching, learning, research, student portfolios, information technology, campus administration, medical and library sciences, and building open source software.



DEVOPS IN THE CLASSROOM

GitLab for Education Program members teach and learn every stage of the [DevOps lifecycle](#). The ability to teach all stages in one platform is a crucial advantage for both the faculty and students. Adoption is higher in the [manage](#) through [configure stages](#), with the least adoption in the [secure](#) and [protect stages](#).



CROSS-CAMPUS COLLABORATION

DevOps and GitLab are not siloed into either teaching code or running the institution. Cross-collaboration and multiple use cases between students, faculty, staff, and information technology professionals are common. DevOps has become an enterprise tool at educational institutions.



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GITLAB'S DEPLOYMENT FLEXIBILITY

The flexibility of deployment method, either self-managed or SaaS, is a large advantage of the GitLab for Education Program offering. Campuses are able to choose the method that works best with their security requirements and authentication systems as well as meeting research funding requirements.



ADVANCING AND TRANSFORMING SCIENCE

GitLab transforms and advances scientific research. Source control management, continuous integration, and continuous deployment are adopted to increase collaboration, speed up the research cycle, increase the repeatability of results, and meet public access policy requirements of funding agencies.



NEED FOR INCREASED AWARENESS OUTSIDE OF EARLY ADOPTERS

The survey highlights a need to increase awareness of DevOps and GitLab for Education offerings among faculty.

Demographic breakdown

A total of 843 participants took part in the survey. Of those, 700 were from a 4-year university, with 42 from research institutes, 27 in primary school through high school, and the remainder in either 2-year junior college or vocational schools. Respondents were primarily from North America (468), with 206 from Europe, 91 from Asia, 19 from Australia or New Zealand, and five from Africa.

The majority of respondents (**27%**) were from relatively small institutions (1K-10K students enrolled). A total of **22%** of the respondents were from large universities (over 40K students enrolled) followed by **18%** ranging from 10K-25K, and **17%** from 25K-40K students.

The majority of respondents were students at **41%**, with **15%** identifying as a graduate student. Faculty were **12%** with staff **18%** and administration **4.5%**. The majority (**81%**) of respondents were male, and only **13.6%** were female, and **1.2%** responded non-binary, third-gender, or preferred not to say. This gender gap was also evident in our 2020 GitLab Developer Survey with **88.26%** male and **7.52%** female.

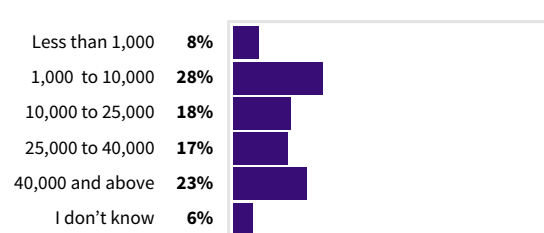
The highest percentage of respondents were in computer science departments at just over **50%**. Information technology was the second-largest category at **26%**. Engineering departments including aerospace, chemical, civil, mechanical, software, and electrical. Respondents also participated from biology, physics, health-related fields, library services, and learning and technology services. The dominant percentages of types of departments remain approximately the same whether or not the institution uses GitLab. Additional responses from respondents currently using GitLab include video game design, cognitive science, social science, geophysics, and earth science/environmental studies.



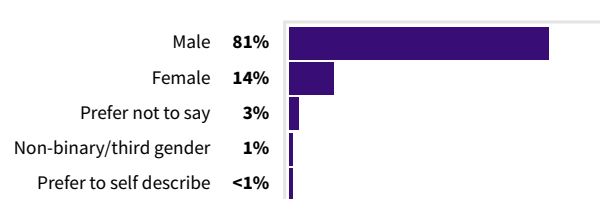
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About the participants

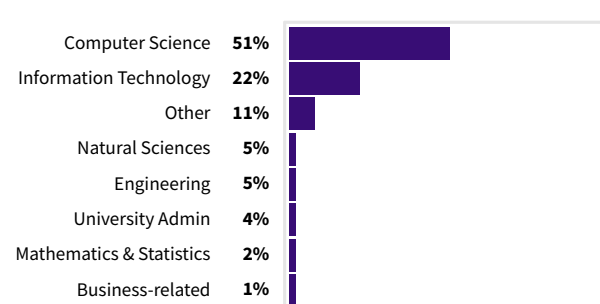
INSTITUTION SIZE



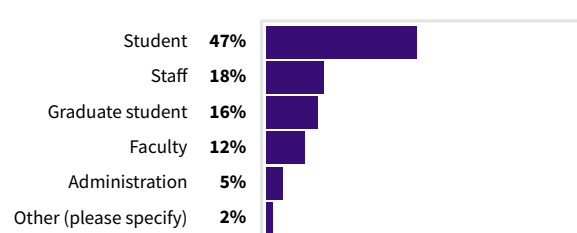
GENDER



DEPARTMENT



ROLE

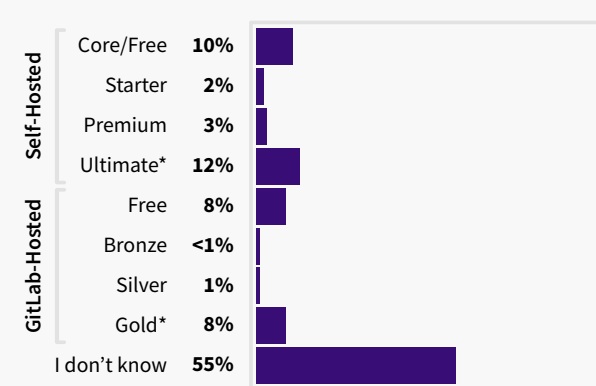


Institutional use

Of all the respondents, 36.6% had a GitLab subscription at their institution and used it, while 2.36% indicated that their institution had a GitLab subscription but they were not able to use it. The remaining 25% either did not know or did not have a subscription. Several respondents indicated that they were not able to use the license because of use case restrictions on administrative or information technology uses.

Of those actively using GitLab, the dominant tier was self-managed Ultimate at **21%** followed by SaaS Ultimate (formerly Gold) at **12%**. Interestingly, **17%** of respondents use the free tier of either self-managed (**9%**) or SaaS (**8%**).

GITLAB TIER USAGE



*Offered through GitLab for Education Program



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Tiers

Of the respondents using a GitLab license, **37%** indicated that they use top-tier features while **47%** are not and **21%** were unsure. Multi-level epics were the most commonly listed top-tier feature followed by issue and epic health reporting and roadmaps. Project security features, such as security dashboards, container scanning, vulnerability management, were also commonly listed.

Respondents who identified as administrators were most likely to answer yes when asked if they were using key features available only at GitLab's top-tiers at **63%**, followed by faculty (**33%**), staff (**31%**), and students (**17%**). The values indicate that information technology professionals have a higher awareness and usage of the platform capabilities and that knowledge has not necessarily transferred to the classroom to the same degree. This may also reflect less familiarity on the part of faculty and students of which features are available by tier.

For those respondents indicating that they are not currently using GitLab at their institution, the primary reason was not enough demand from faculty (**38%**) followed by not enough demand from students (**27%**). Other reasons include the inability to comply with stated program requirements (**9%**) or the inability to comply with the end-user license agreement (**4%**). Awareness of the offering was the most commonly mentioned reason in the other field.

“**At our institution, it is not binary if you are ‘administration’ and ‘teaching/learning.’ We work on all sorts of projects for all aspects of the university from teaching/learning, to research and outreach.**”

Self-managed

The primary reasons for using the self-managed deployment method include the ability to control security and access to the instance on internal servers (**82%**) as well as the ability to integrate with user authentication systems (**55%**). The ability to host multiple instances per institution was also a factor for **15%** of respondents. Respondents also use the self-managed version to integrate with other campus systems and to manage exams and perform forensics. The ability to store large amounts of onsite data as well as ability to meet privacy and security concerns by storing data internal.

SaaS

The primary reason for using the GitLab-hosted version includes ease of use at **67%** and reducing IT infrastructure and maintenance costs at **47%**. Reducing hosting costs for the institution also played a role at **33%**.



Use cases and DevOps stages

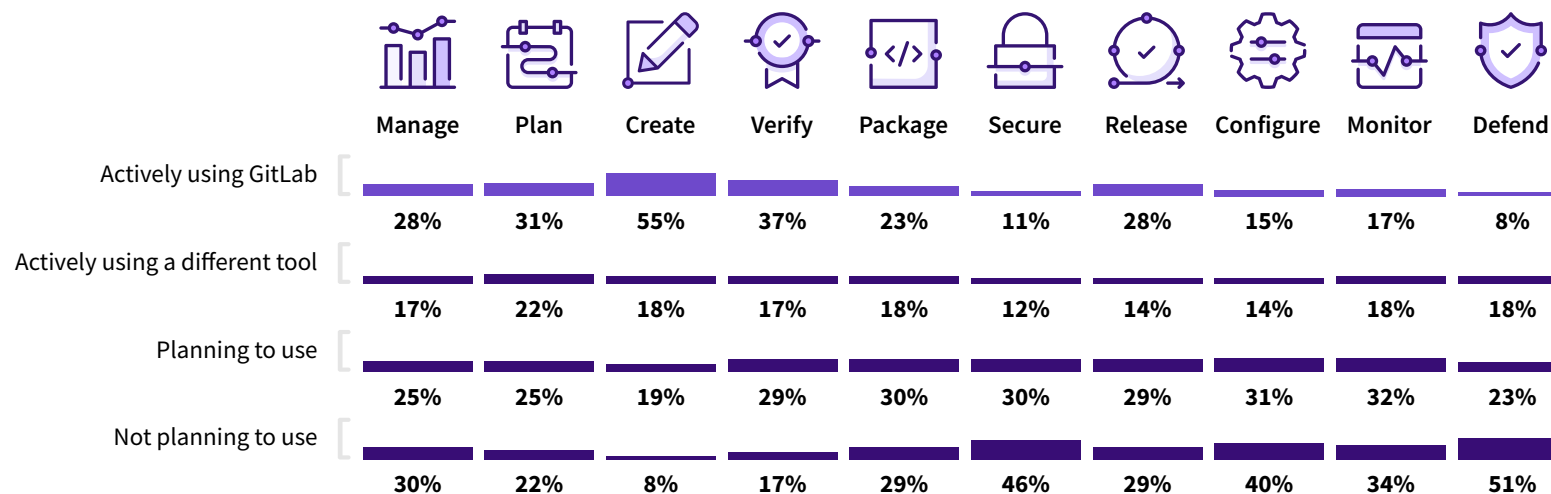
The top four use cases were learning (**28%**), teaching (**22%**), research (**20%**), and information technology/professional use (**19%**). Other uses included open-source software development, maintaining supercomputers, maintaining networks, and support of research activities. Of the respondents, **22%** indicated that they had a secondary use case on campus with the highest being learning at **32%**, and research at **30%**. Additional responses include club or organizational activities, marketing, open source software development, and institutional administration.

Respondents were asked which DevOps stages they are actively using GitLab for, if they are using a different tool and whether or not they are planning to use GitLab in the future. The most common use of GitLab was source control management with **55%** of respondents actively using GitLab followed by Verify (Continuous Integration) at **36%**, Plan (issue tracking, labels) **30%**, Manage (authentication, compliance management) and Release (Continuous Delivery) at **27%**.

These respondents show that GitLab is used widely across the stages of the DevOps lifecycle. The lowest stage of feature utilization was in the Defend and Secure. This mirrors results we've seen in the GitLab Developer Survey as well.

The overall pattern of source control management being the dominantly used stage in GitLab held for all respondent roles, whether administration, faculty, staff, or students. The Release stage was highly used by administrators as well as those identifying as "other."

Monitor (**31%**) and Configure (**30%**) were the stages most respondents were planning to use. Release, Secure, Package, and Verify all fairly evenly spread around **25%** or higher with regards to planning to use. Secure (**44%**) and Defend (**49%**) were the stages respondents are not planning to use. These percentages held relatively the same by role as well.



Additional DevOps tools

The additional DevOps tools chosen by respondents include GitHub (**85%**), Jenkins (**21%**), BitBucket (**17%**), and Travis CI (**11%**), and GitHub Actions (**15%**). Interestingly the percentages of those using GitHub shift by role as students were **91%** and faculty **89%** whereas staff were only **65%** and administrators were **68%**. These results confirm that GitHub is widely used in educational institutions especially among students and faculty for hosting code repositories. The history and longevity of GitHub's presence in the educator sector as well as the resources provided are factors contributing to GitHub's prominence.

Of the respondents currently using GitLab, **85%** were also using GitHub whereas those not using GitLab used GitHub were **80%**. This indicates that both GitHub and GitLab are frequently used in some combination.

“ We have multiple project-oriented courses where we expect students to make full use of all the CI/CD offered to them, including making sure that what they deploy...[will not fail before it is turned in to be graded](SAST, code quality, etc.). Even bigger and more advanced pipelines are used for our own (partly open source) software that we develop and host on our GitLab Ultimate self-managed.

Challenges to adoption

The primary reason for not using GitLab was “Not enough demand from faculty” **36%** followed by “Not enough demand from students” at **26%**. A wide variety of specific challenges to adopting GitLab were listed. The most commonly mentioned factor was the lack of awareness of GitLab and DevOps by faculty and staff. The lack of specialized tools to make it easier to teach in the classroom was also mentioned. On the information technology side or administrative use, use case limitations with the free license and cost, were cited as challenges to adoption.

“ The students nor faculty realize how GitLab could impact their daily life in terms of project collaboration even if they know it exists.

“ Lack of knowledge of DevOps among faculty.

“ There is a lack of awareness about Git and open source.

“ It's not enough to have a great Git environment. I would love to show GitLab as an alternative. I need the tools to make my life as an educator easier to manage as I have the skills, but not the time to build them.



Resources for learning

Content and events

Participants were asked what kinds of resources would be of interest to learn GitLab. Best practices was the top response from respondents in all roles followed by code samples, example projects, and exercises/tutorials. Staff expressed a higher interest in example workflows and protocols for research laboratories, webinars, and white papers.

From the types of professional training respondents answered that certification is most interesting at **57%** followed by e-learning **49%** and virtual instructor led-training at **35%**. Students and graduate students were more interested in certification at **58%** and **67%**, respectively, while administration, faculty, and staff were more interested in e-learning **70%**, **55%**, and **53%**, respectively.

Faculty and staff were most interested in GitLab webinars and GitLab's annual user conference, whereas students were most interested in hackathons. The lack of interest in GitLab Meetups suggests that participants are not aware of what Meetups are.

Interestingly, respondents did not list any of the major academic associations in computer science and computer education when asked about professional or academic associations they were involved in. This identifies the increased need for awareness of the GitLab offering and DevOps as a whole within the academic associations.

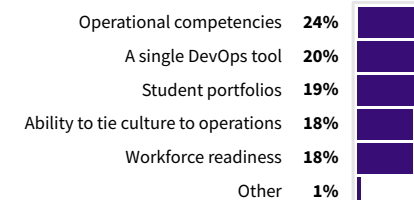
Benefits of teaching and learning GitLab

Faculty and staff were asked about the benefits of teaching and learning GitLab. The ability to teach operations competencies (**57%**) and the ability to teach with an end-to-end tool for learning DevOps competencies (**51%**) received the highest responses. For students, the top response was also the ability to teach operational competencies (**49%**) followed by the ability to build a portfolio and record of contributions (**45%**). Workforce readiness was also important, students (**40%**), and faculty (**46%**).

“ I've found the GitLab for Education Program to be invaluable for both teaching and research. The student cohorts receive in-depth training on how to use GitLab, as an exemplar of contemporary DevOps practice.

“ It provides a very good tool to immerse students in the professional IT world with clear requirements and easy conduction.

BENEFITS OF GITLAB



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Program feedback

Current offerings

The majority of respondents stated that they were unaware or had not accessed the GitLab for Education services and offerings such as the sign up process, response time, quality of responses, renewal process, and license structure. These responses are indicative of the fact that the license is issued to an individual on the campus and users of the license do not interact with GitLab directly. Given that the program has over 890K current participants, these results indicate a large opportunity to better connect and engage with our users and not just the license holders.

Other respondents were either very satisfied or satisfied with the existing services and offerings and very few respondents answered unsatisfied. The feature with the highest dissatisfaction among existing GitLab users was the license structure with 4.5% as well as those not using GitLab at 7.5% of respondents.

Of the respondents currently using GitLab, **65%** indicated that free licenses for teaching, learning and research are very important and **23%** indicated that they were important. The second most important feature was a campus-wide (all use cases) license at **52%** indicating it was very important and **30%** important. Discounted support and GitLab content related specifically to educational institutions were the next most important benefits.

Areas for improvement

GITLAB OFFERING AWARENESS

Over half of respondents were unsure what tier of GitLab their institution was using. We need to better educate program members on the value the program is providing and how they can take advantage of it. Several respondents indicated that they were unaware of the offering.

FACULTY ENABLEMENT

Not only do we need to increase awareness of DevOps as a discipline and an industry in higher academia, but also we need to provide the resources to better enable faculty to bring this technology to the classroom. This includes best practices, e-learning content, lab exercises, and code samples.

MIXED-USE CASE / CAMPUS-WIDE LICENSE

Many campuses around the world want to use GitLab across the enterprise. In the modern campus, singular personas and use cases no longer exist. Collaboration is happening across the campus. License restrictions based on use cases have been a barrier to collaboration and adoption.

SUPPORT FOR CLASSROOM MANAGEMENT

Resources and specialized tools for using GitLab in an academic setting are needed to set faculty and students up for success. The types of resources needed include guides for setting up student accounts, managing provisioning, groups, and projects.

DIVERSITY, INCLUSIVITY, AND BELONGING

Diversity, inclusivity and belonging are one of GitLab's core values and we have many ongoing initiatives to increase the participation of underrepresented groups both at GitLab the company and within our community. Given that **81%** of our respondents were male, we have much work to do to increase diversity, particularly among women in our GitLab for Education community.



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Looking ahead

We want to thank all of our respondents for taking the time to provide us with detailed and valuable feedback. When you speak, we listen! We are eager and excited to implement these learnings in 2021. We have a wide range of additions coming, and we hope you continue to stay in touch with us.

One of the biggest pieces of feedback we've received in this survey and directly from our program members over the last year was the lack of a campus-wide license offering. We are thrilled to announce that we have a new offering that enables everyone on campus to use GitLab.

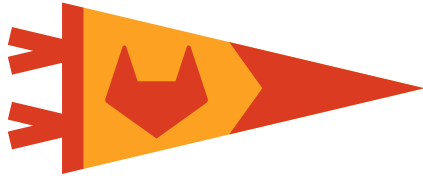
GitLab for Campuses provides the best GitLab has to offer to the entire campus for one simple affordable price.

[Learn more](#)

We'll release the 2021 **GitLab for Education Survey** in August 2021. Please reach out to us any time at education@gitlab.com or open an issue in our project with the [Program Member Feedback Issue Template](#).



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GitLab for Education

Everyone can contribute.

We are committed to bringing DevOps to education institutions around the world. We provide free, unlimited, top-tier licenses to qualifying educational institutions for teaching, learning, and research.

[Apply now](#)

About GitLab

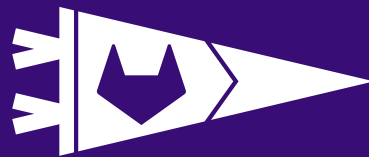
GitLab is a DevOps platform built from the ground up as a single application for all stages of the DevOps lifecycle enabling Product, Development, QA, Security, and Operations teams to work concurrently on the same project. GitLab provides a single data store, one user interface, and one permission model across the DevOps lifecycle. This allows teams to significantly reduce cycle times through more efficient collaboration and enhanced focus.

Built on Open Source, GitLab works alongside its growing community, which is composed of thousands of developers and millions of users, to continuously deliver new DevOps innovations. More than 100,000 organizations from startups to global enterprises, including Ticketmaster, Jaguar Land Rover, NASDAQ, Dish Network, and Comcast trust GitLab to deliver great software faster. All-remote since 2014, GitLab has more than 1,300 team members in 68 countries.

Ready to give it a try?

[Try GitLab free for 30 days](#)





GitLab for Education