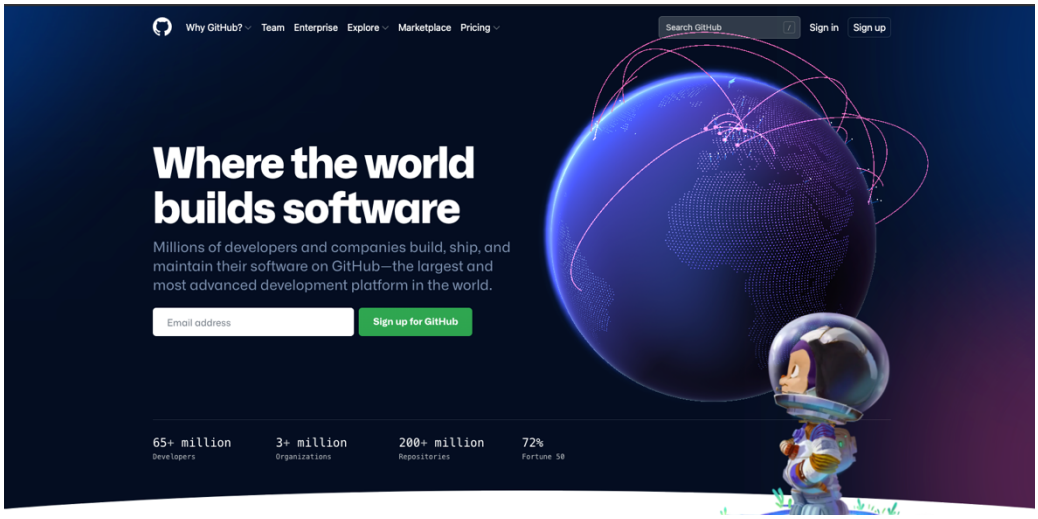
Git & GitHub

1. Registering

If you do not have a GitHub account, go to www.github.com and get one using the sign-up button.

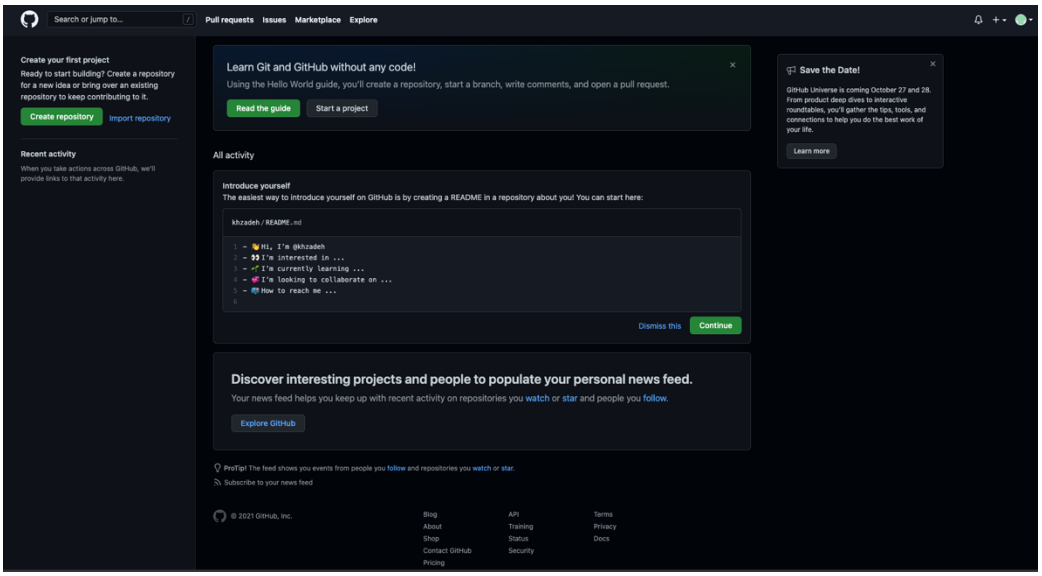


Verify the captcha challenge and validate your email address.

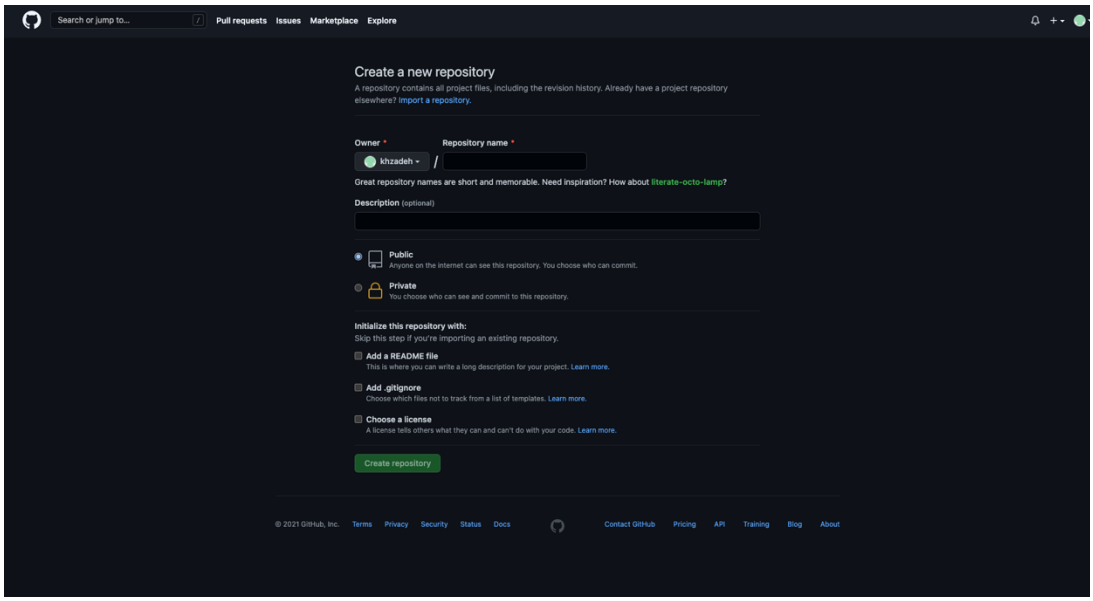
Then, you will be asked to answer some questions so that the GitHub can calibrate your interests and skill level. This can be helpful to find topics that will captivate you.

Finally, you will be asked to select between a free account and paid one. Select the **free account**!

You will be relocated to a page like the image down below.



In that page you can create repositories (like the image down below) and work with the GitHub flow.



2. Using GitHub

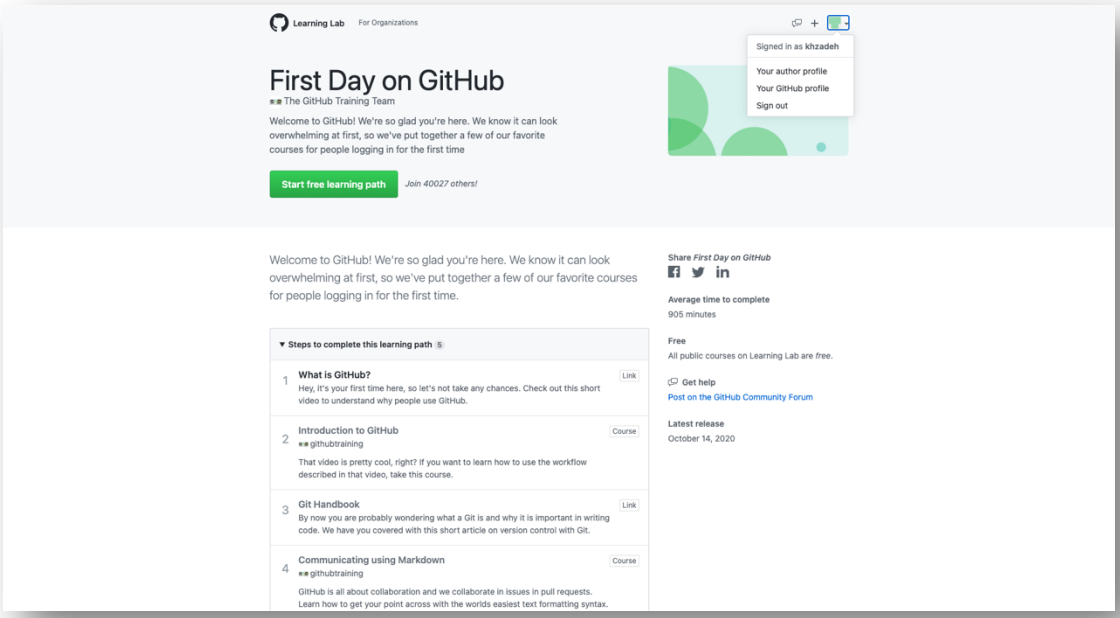
In this practical exercise you will learn the basics of Git and GitHub. Below you find a list with important terms and the link to the two tutorials that you should complete.

Key terms: repository (or repo), readme file, Markdown, Branch/branching, Master branch, commit, pull request, Merge pull request, issues

- **Repository/repo**: set of files and folders used to organize a single project. It is advised to always include a Readme file!
- **Readme**: File with information about the project. Be concise but clear when creating this file.
- **Markdown**: simplified markup language to, for instance, change the layout of the readme file.
- **Branch**: A version of the project
- **Branching**: Making a new Branch from an existing one
- **Master**: Or Master Branch is the main version of the project, where all the branches end up converging
- **Commit**: A saved change (Commit messages are important!!)
- **Pull request**: proposing your commits/changes to be reviewed by someone and merged into their Branch
- **Merge pull request**: final step of the Git/GitHub workflow!
- **Issues**: place for chatting about problems, code review, or anything else

Tutorials:

After you create your account or if you already have an account please follow the learning path on GitHub called the first day on GitHub (https://lab.github.com/githubtraining/first-day-on-github)



Learning Path (first day on GitHub):

- Sign in and start the free course
- What is GitHub
  (watch the video:
  https://www.youtube.com/watch?v=w3jLJU7DT5E&feature=youtu.be)
- Introduction to GitHub
  (https://lab.github.com/githubtraining/introduction-to-github)
    - Follow the 8 steps to complete the course path.
    - Don't miss the video to understand the GitHub flow
      (https://www.youtube.com/watch?v=PBI2Rz-ZOxU)
- Read the Git Handbook
  (https://guides.github.com/introduction/git-handbook/)
- Communicating with markdown
  (https://lab.github.com/githubtraining/communicating-using-markdown)
- Uploading your project to GitHub
  (https://lab.github.com/githubtraining/uploading-your-project-to-github)

TIP: If you get out of one of the tutorials, you can resume your work by clicking again on the corresponding link.

TIP#2: do not forget to regularly check the email account you used to register in GitHub. You will see that GitHub sends emails after each action.

3. Take home message

After completing the GitHub tutorials, you should remember:

- **What is GitHub? -** GitHub is a website built on top of Git, a powerful version control tool
- **Repositories? -** Your work is safe in here!
- **GitHub issues? -** They allow you to have the complete story of the project in one place
- **GitHub Pages? -** Your project can have a website attached to it!
- **Branching? –** Use Branching whenever you want to add a feature or change something on your project! (Master is your main branch! Where the most stable version of your project will always be.)
- **Commit? -** Adding a new file, a new line or removing something, a change!
- **Pull request? -** You can request it when you finish your work!
- **Merging your pull request? -** Everything is alright? Is everything working as it should? Then confirm the merge! (you don't have to delete the branch you were working on but remember not let it overpopulate).

4. Further reading

Feel free to browse and read the resources listed below. The first one will give you a deeper understanding of Git, the version control system behind GitHub.

- **Git**: http://www-cs-students.stanford.edu/~blynn/gitmagic/
- **Markdown**: https://guides.github.com/features/mastering-markdown/ & https://daringfireball.net/projects/markdown/syntax
- **All official GitHub courses:** https://lab.github.com/
- **Videos from beginner to advanced user:** https://www.youtube.com/playlist?list=PL0lo9MOBetEHhfG9vJzVCTiDYcbhAiEqL