



# GitHub Tutorial

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8-11-2024

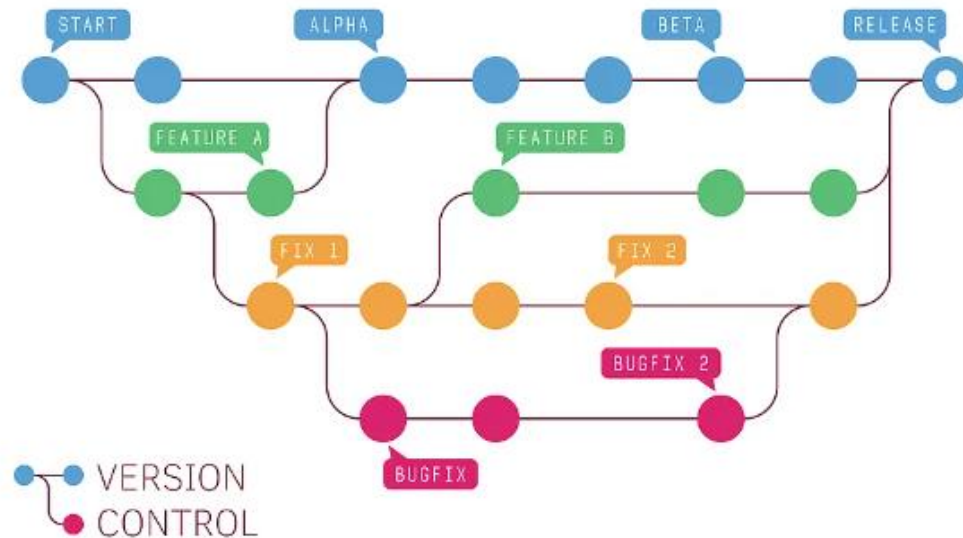
(Sekolah Bisnis Manajemen ITB)



# What is GitHub

- **Definition:**

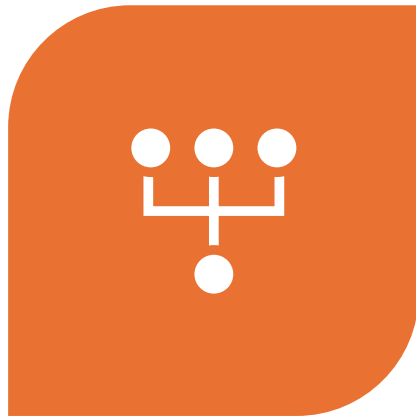
GitHub is a cloud-based platform for **version control** and **collaborative software** development.



# Key Feature

- **Documentation:** Users can create or upload a files:
  - Word, Excel, pptx, PDF, Image (PNG, JPEG).
  - README files or LICENSE files (README.md), (LICENSE.md)
  - Application Programming Interface (API) – software interface
  - Script Files (R Script, Python, Java, Javascript, C++, SQL, etc)
  - Dataset (CSV file, JSON, XML, etc)
- **Repository Hosting:** Allows users to create and store code repositories online.
- **Collaboration Tools:** Supports team collaboration like pull requests, code reviews, and issue tracking.
- **Community Contributions:** Facilitates open-source projects where developers can contribute and collaborate globally.
- **Integrations:** Connects with various third-party tools and services, testing, and deployment.

# GitHub Benefit



STREAMLINES CODE  
**MANAGEMENT** (COMMIT,  
BRANCH, MERGE)



ENHANCES TEAM  
**COLLABORATION**



PROMOTES  
**TRANSPARENCY** IN  
PROJECTS

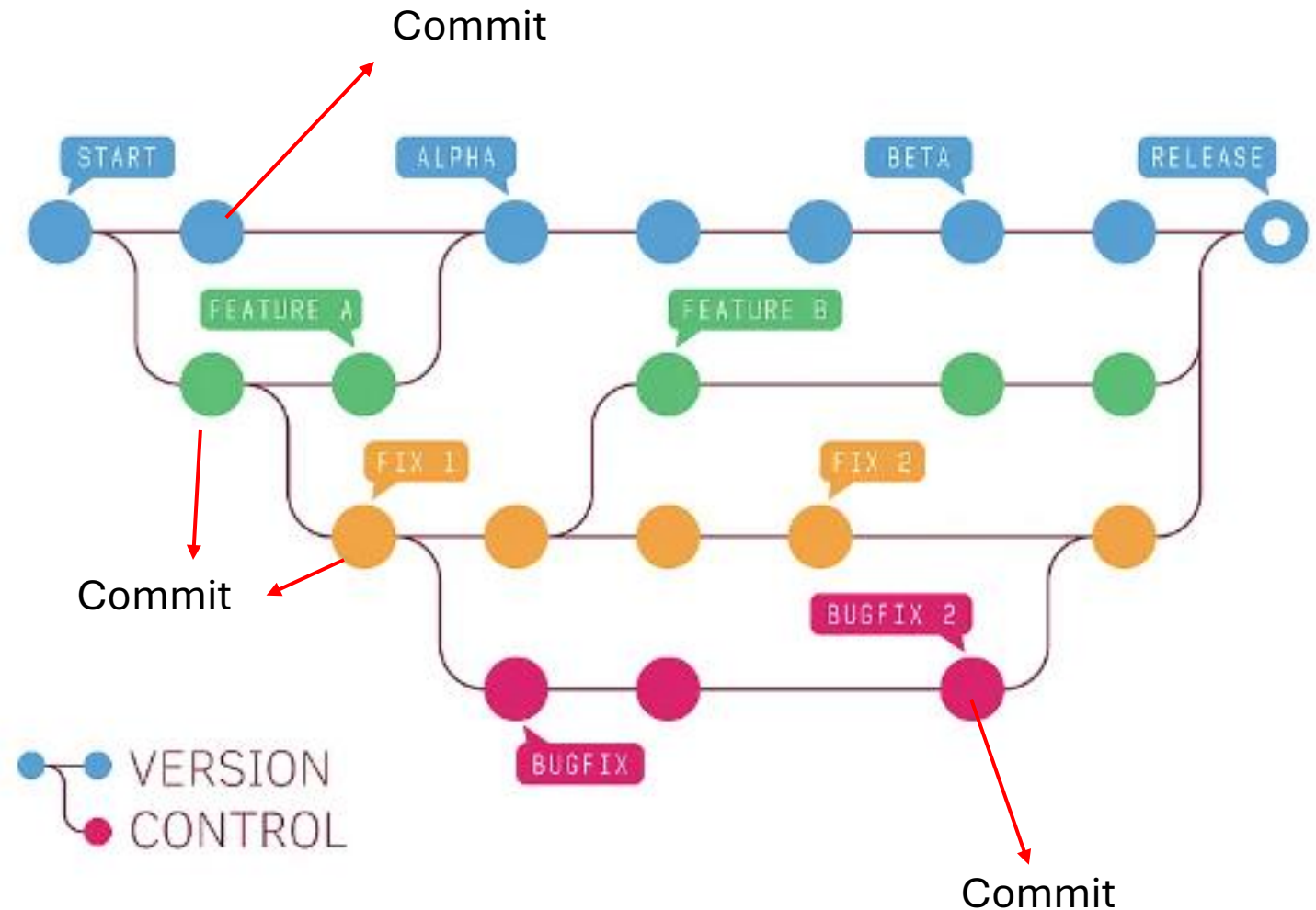
# Commit

## Definition:

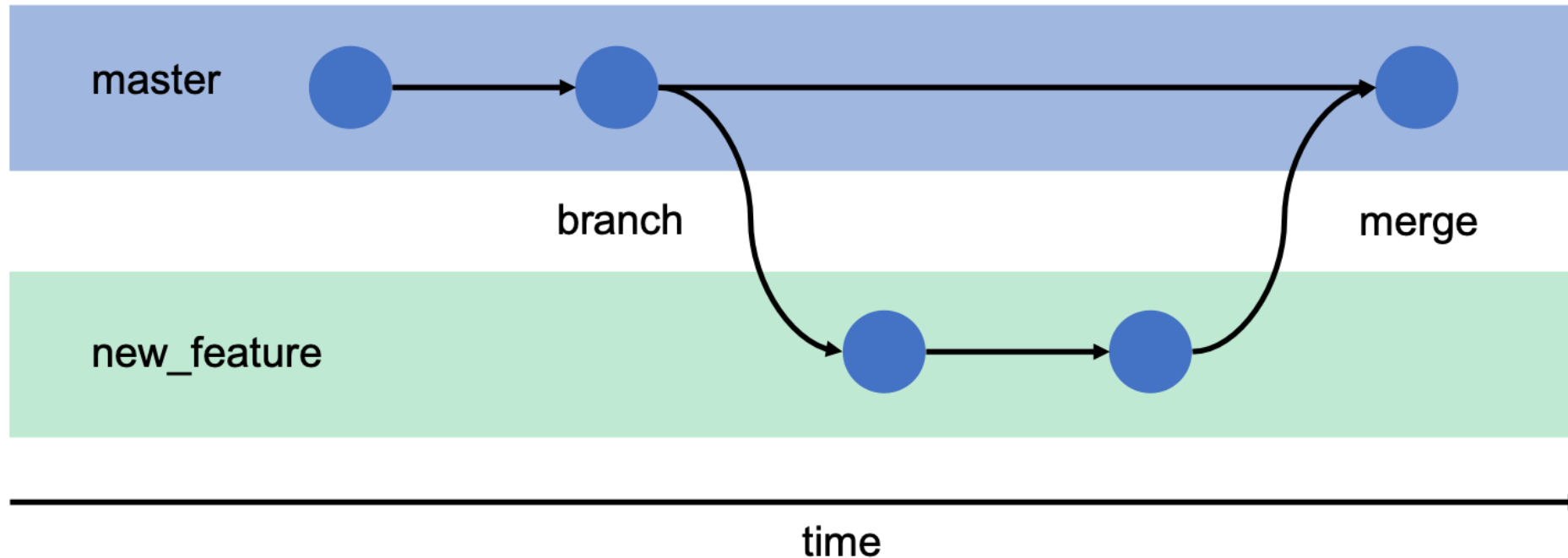
- A **commit** is a saved "snapshot" of changes in a repository.
- It records updates, deletions, and additions to files over time.

## Purpose:

- Tracks changes in a project.
- Allows reverting to previous versions.
- Facilitates collaboration between developers.



# Branch and Merge



- **Branch**

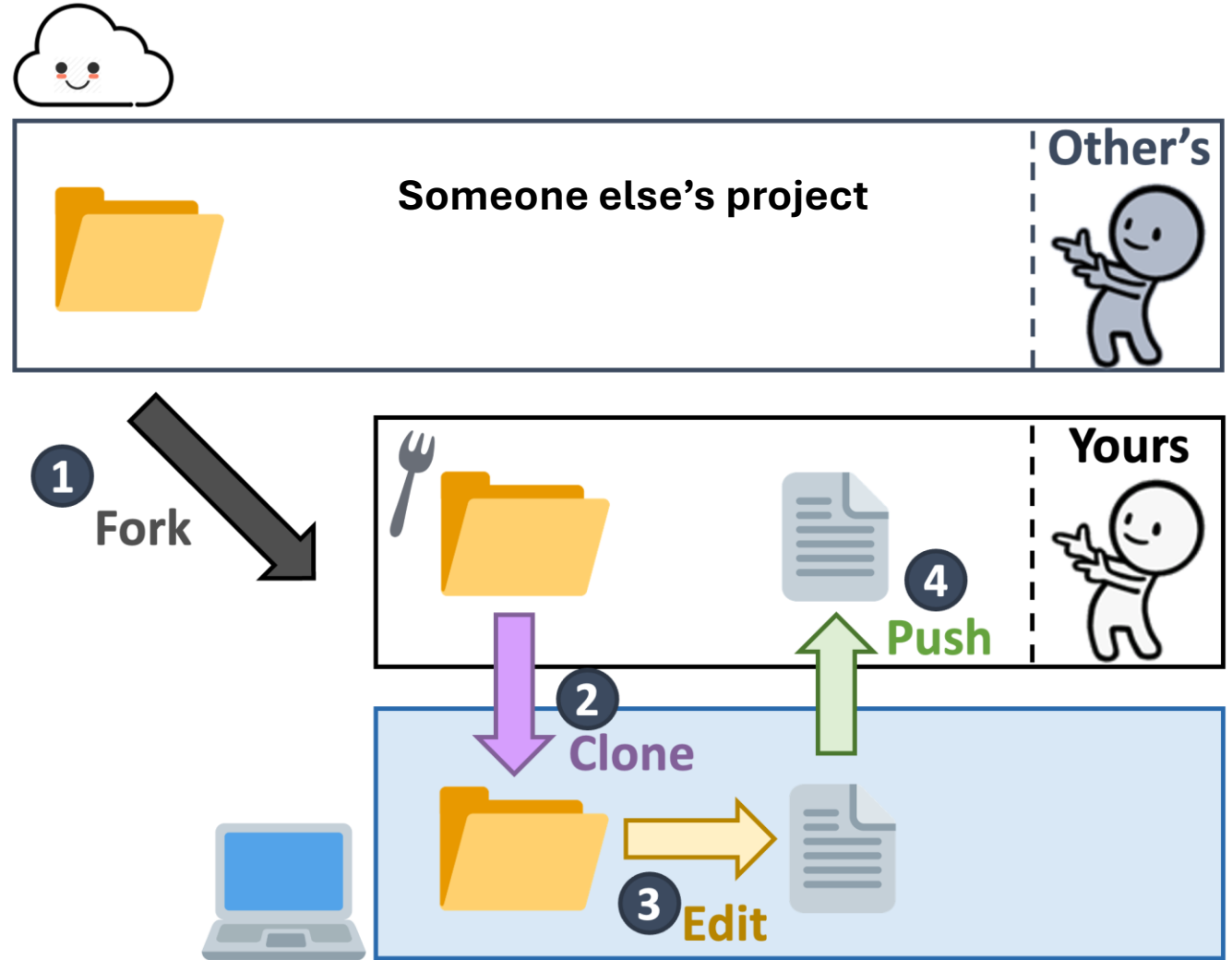
1. **Parallel Development:** Branches allow working on different features simultaneously.
2. **Isolated Changes:** Keeps changes separate from the **main/master code**.

- **Merge**

1. **Combine Branches:** Merge integrates changes from different branches.
2. **Update Main/Master Code:** Applies branch changes to the main project.

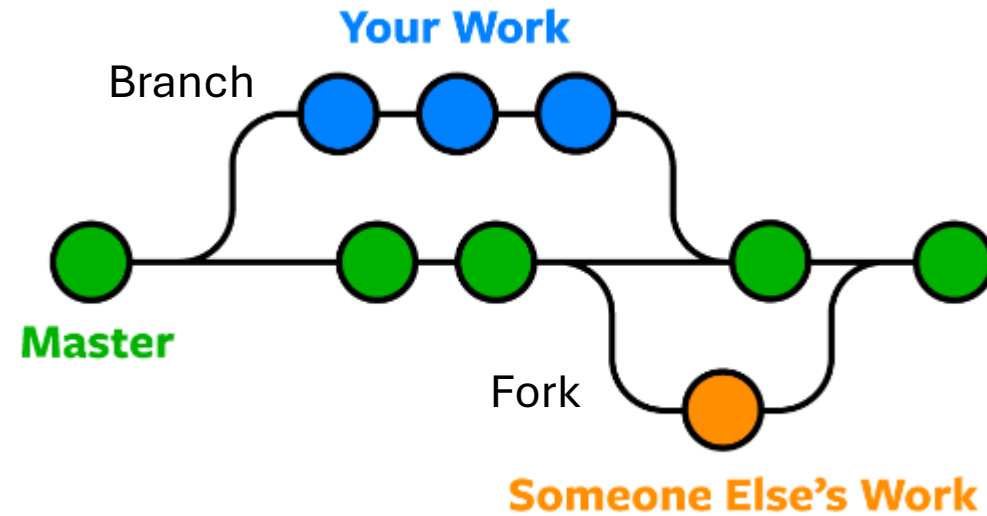
# Forking Project

- **Create Personal Copy:**  
Forking makes a personal copy of a project.
- **Experiment Freely:**  
Allows independent changes without impacting the original



@ Nick J Lyon

# Branch and Fork



## Branch

- **Internal development:** Creates a parallel version of a project within the same repository (often for feature development or testing).
- **Feature development:** bug fixes, or testing. Once the work is completed, the branch is typically merged back into the main branch.

## Fork

- **Someone else's project:** Creates an independent copy of a repository (often for external contributions).
- **No Immediate Connection:** Changes made in your fork do not affect the original repository until a pull request is accepted and merged.

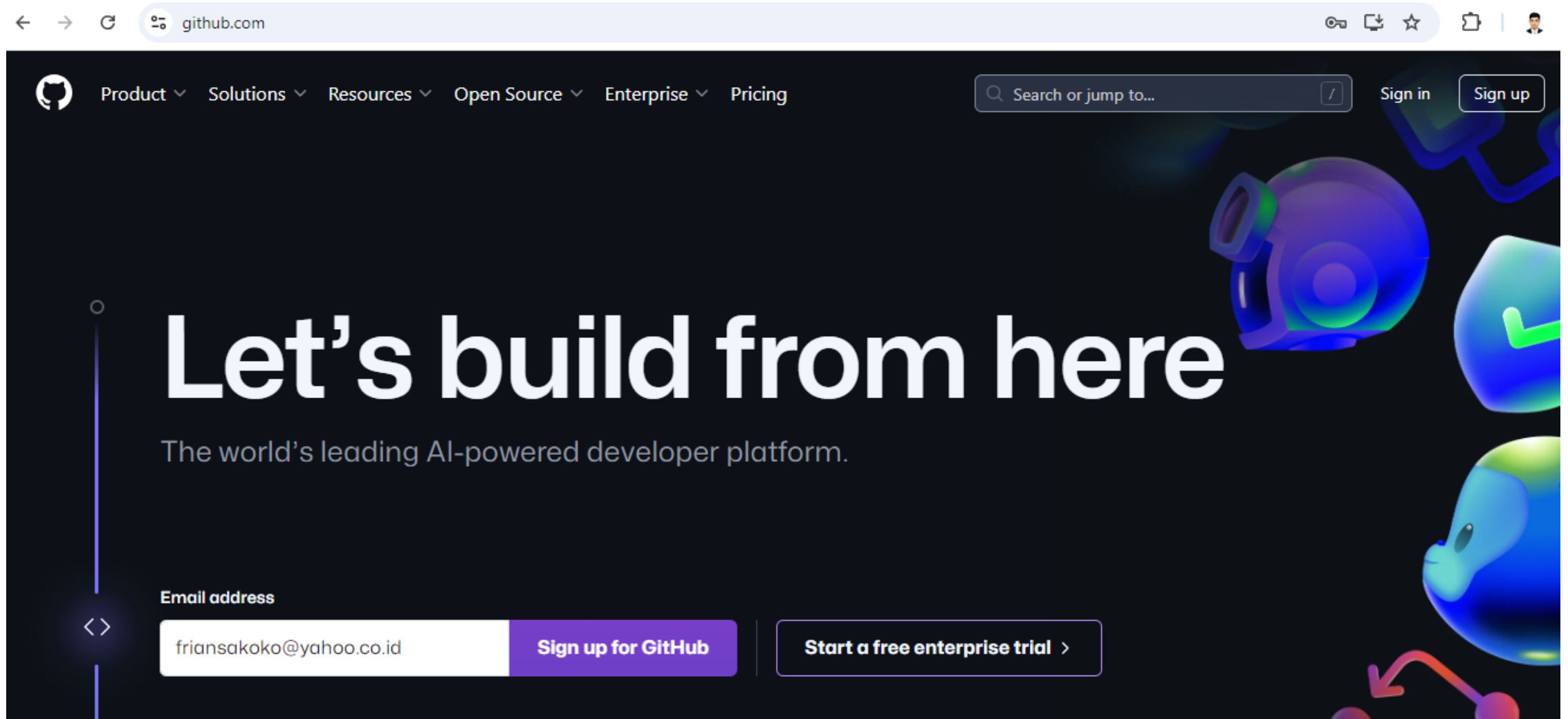


# How to Signup

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# Get Started



<https://github.com/>

# Signup Process

Welcome to GitHub!  
Let's begin the adventure

**Enter your email\***

✓ koko.friansa@tse.itera.ac.id

**Create a password\***

✓ [.....]

**Enter a username\***

✓ friansakoko

**Email preferences**

☐ Receive occasional product updates and announcements.

Continue

Create a username and password

Welcome to GitHub!  
Let's begin the adventure

**Verify your account**

Gunakan tanda panah untuk mengubah jumlah objek sampai sesuai dengan gambar di sebelah kiri. (1 dari 5)

Cocokkan Ini!

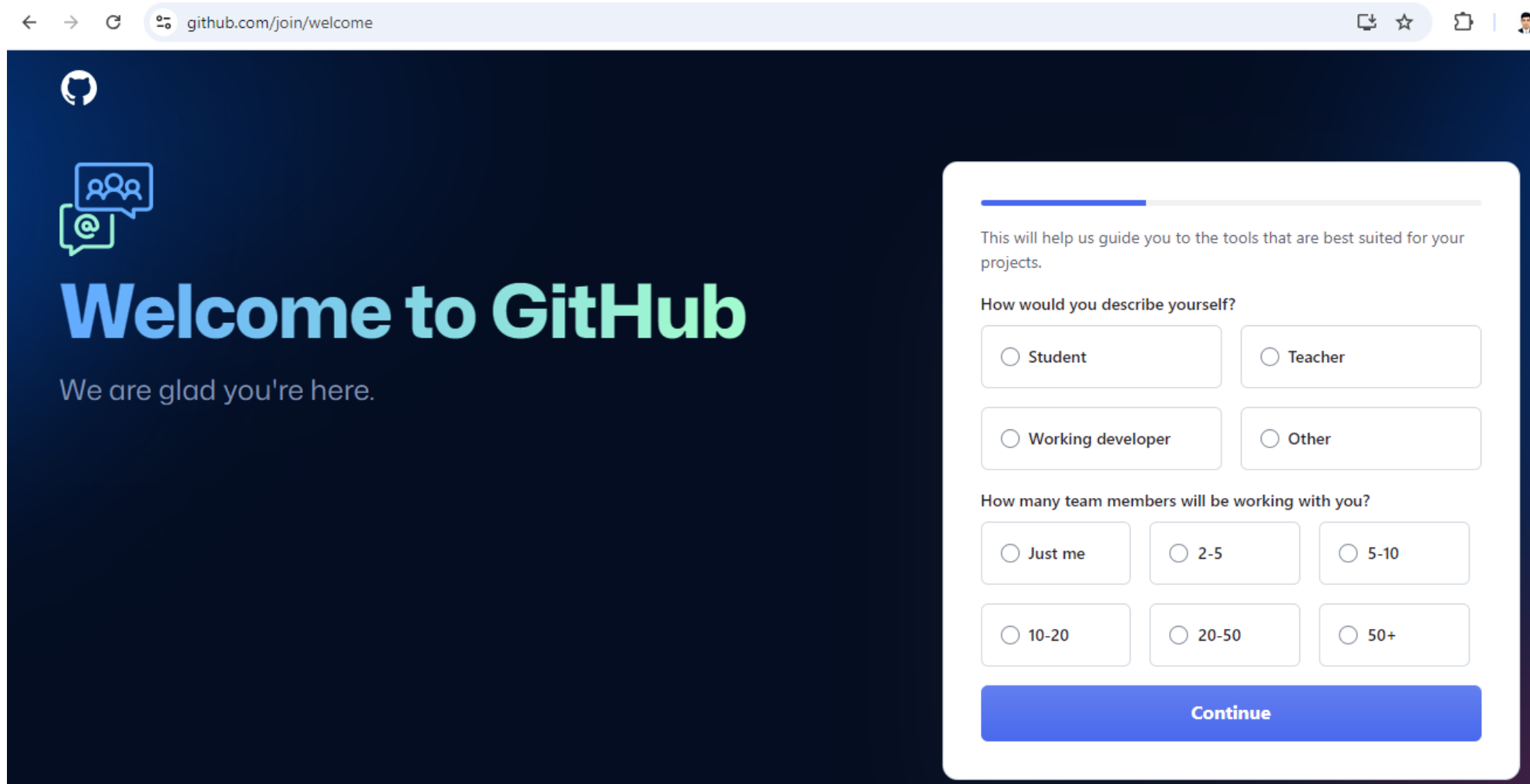
Kirim

39417ffe3316a6fb3.6970677904


Audio Mulai Ulang


CAPTCHA

# Describe yourself!



← → ↻ github.com/join/welcome





## Welcome to GitHub

We are glad you're here.

This will help us guide you to the tools that are best suited for your projects.

How would you describe yourself?

☐ Student ☐ Teacher

☐ Working developer ☐ Other

How many team members will be working with you?

☐ Just me ☐ 2-5 ☐ 5-10

☐ 10-20 ☐ 20-50 ☐ 50+

[Continue](#)

# Edit your profile!

← → ↺

github.com/friansakoko

📄 ⭐ 📁 | 👤

☰

🐙 friansakoko

🔍 Type / to search

+ ▾ 🕒 🔗 📧 👤


📖 Overview

📁 Repositories

📁 Projects

📦 Packages

⭐ Stars



😊

**Koko Friansa**  
friansakoko

Edit profile

🏢 Institut Teknologi Sumatera

✉ koko.friansa@tse.itera.ac.id

📅 Joined 16 minutes ago

Popular repositories

Customize your pins

You don't have any public repositories yet.

1 contribution in the last year

Contribution settings ▾

2024

|     | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Mon |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Wed |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Fri |     |     |     |     |     |     |     |     |     |     |     |     |     |

Learn how we count contributions

Less  More

This is your **contribution graph**. Your first square is for joining GitHub and you'll earn more as you make [additional contributions](#). More contributions means a higher contrast square color for that day. Over time, your chart might start looking [something like this](#).

We have a quick guide that will show you how to create your first repository and earn more green squares!

📖 Read the Hello World guide

Submit your work



# Submit your work

+

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○



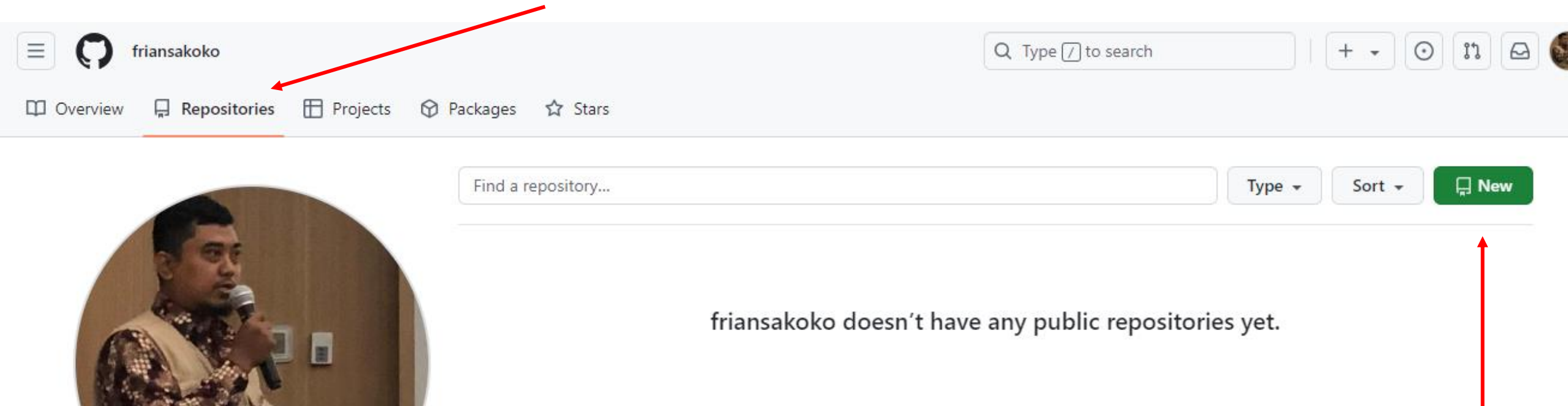
## Create repositories



## Upload file

# Create your repositories

Click Repositories Menu



Add **New** button



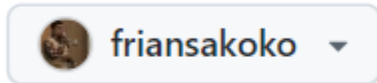
# Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere?

[Import a repository.](#)

Required fields are marked with an asterisk (\*).

Owner \*



Repository name \*

/ KuliahsBM

✔ KuliahsBM is available.



Write the repository name in the box

Great repository names are short and memorable. Need inspiration? How about **ubiquitous-umbrella** ?

Description (optional)

Repository ini terdiri dari beberapa algoritma deep learning untuk prediksi



Description of the repository



**Public**

Anyone on the internet can see this repository. You choose who can commit.



**Private**

You choose who can see and commit to this repository.

Initialize this repository with:



Add a README file



A file that provides essential information about the project

# Interact with the repository

Quick setup — if you've done this kind of thing before



Set up in Desktop

or

HTTPS

SSH

`https://github.com/friansakoko/KuliahSBM.git`

Get started by [creating a new file](#) or [uploading an existing file](#). We recommend every repository include a [README](#), [LICENSE](#), and [.gitignore](#).

...or create a new repository on the command line

```
echo "# KuliahSBM" >> README.md
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin https://github.com/friansakoko/KuliahSBM.git
git push -u origin main
```

...or push an existing repository from the command line

```
git remote add origin https://github.com/friansakoko/KuliahSBM.git
git branch -M main
git push -u origin main
```

methods for securely communicating with a repository, specifically for operations like cloning, pushing, and pulling code.

Upload a file

Guide users on how to set up and push their code to the new repository.

# Create repositories

2 contributions in the last year

Contribution settings ▾



# Congratulation!

A new activity has appeared.

Contribution activity

October 20, 2024

Created their first repository

Oct 20



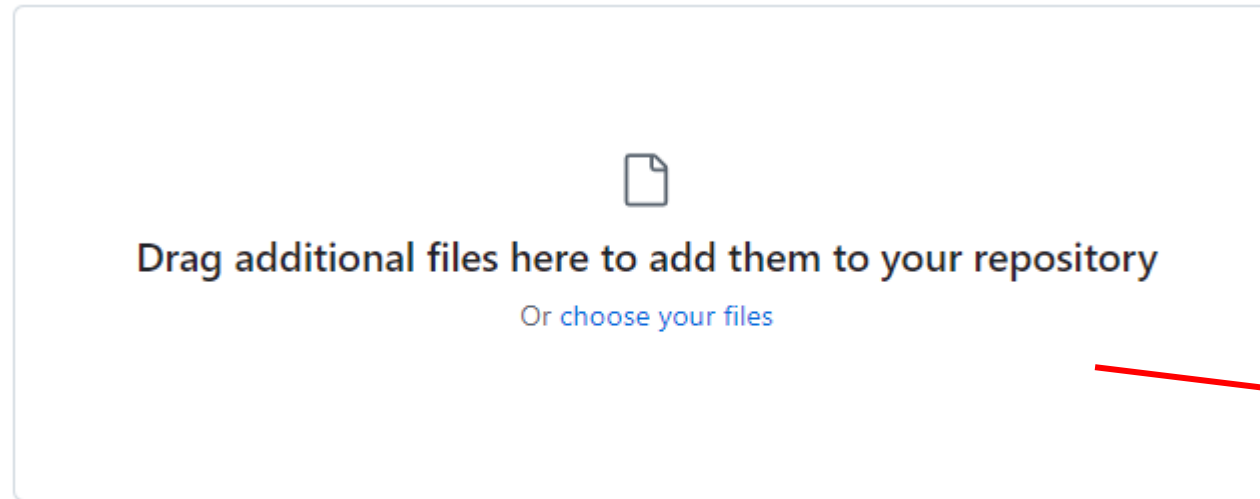
First repository

 **KuliahSBM** Public

A new activity  
(Create the first repository)

Upload file

# Upload File



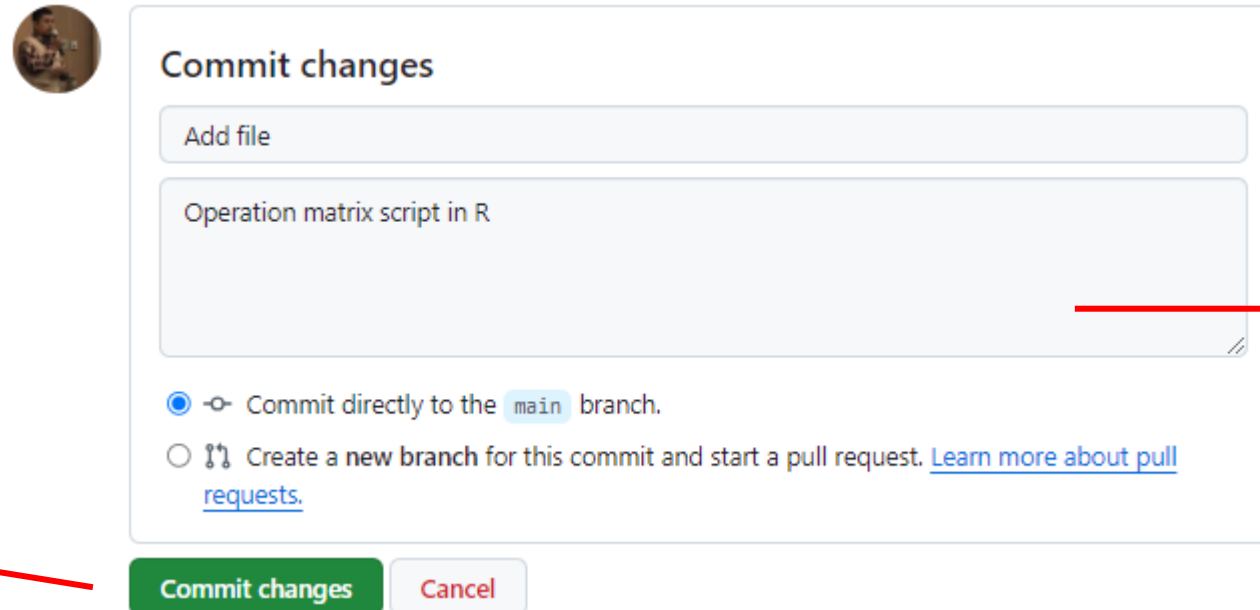
Drag additional files here to add them to your repository  
Or choose your files

Drag and drop a new file



Matrix.R x

Candidate files to be uploaded



Commit changes

Add file

Operation matrix script in R

☒ Commit directly to the `main` branch.  
☐ Create a new branch for this commit and start a pull request. [Learn more about pull requests.](#)

Commit changes Cancel

Commit box  
(write a description for tracking, history management)



Click Commit changes button for uploading file

Upload file

# Congratulation!

A new file has been uploaded



main ▾






Go to file

+

<> Code ▾

 friansakoko [Add file](#) 

0525fa1 · now 

|   |                                    |            |
|---|------------------------------------|------------|
|  (RFE) Prediksi (GRU) .ipynb | Update (RFE) Prediksi (GRU) .ipynb | 2 days ago |
|  Matrix.R                   | Add file                           | now        |