

Git and GitHub Command Cheat Sheet

ARPHost, LLC

Everything you need to take a local project to a published repository.

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ONE TIME SETUP

```
git config --global user.name "Your Name"
```

```
git config --global user.email "you@example.com"
```

```
git config --global init.defaultBranch main
```

Matches the branch name GitHub expects on every new project.

```
ssh-keygen -t ed25519 -C "you@example.com"
```

```
ssh -T git@github.com
```

A greeting naming your account is success, not an error. GitHub has not accepted account passwords for Git since August 2021.

FIRST PUSH, EXISTING PROJECT

```
git init
```

```
git add .
```

Write .gitignore first. A secret that reaches the history has to be rotated, not deleted.

```
git commit -m "Initial commit"
```

```
git branch -M main
```

```
git remote add origin git@github.com:you/repo.git
```

```
git push -u origin main
```

Create the GitHub repository empty. A README on the remote is the top cause of a rejected first push.

EVERYDAY LOOP

```
git status
```

```
git add src/ README.md
```

```
git commit -m "Fix timeout on bulk provisioning"
```

```
git pull --rebase
```

Replays your commits on top of the remote. Keeps history linear and avoids most conflicts.

```
git push
```

UNDO SAFELY

```
git restore FILE
```

Throw away uncommitted edits to one file.

```
git restore --staged FILE
```

Unstage without losing the edits.

```
git commit --amend
```

Fix the last commit or its message, before it is pushed.

```
git revert COMMIT
```

Reverse a pushed commit with a new one. The safe choice on any shared branch.

BRANCHES AND PULL REQUESTS

```
git switch -c feature/short-description
```

```
git push -u origin feature/short-description
```

```
gh pr create --fill
```

Protect main, require one review, keep branches short lived.

```
git push --force-with-lease
```

Never plain force push a shared branch. This variant refuses to overwrite work you have not seen.

CREATE AND PUSH IN ONE STEP

```
gh auth login
```

```
gh repo create NAME --private --source=. --push
```

Useful on servers and inside provisioning scripts.

INSPECT BEFORE YOU PUSH

```
git log --oneline -10
```

```
git diff --staged
```

```
git remote -v
```

```
git branch -vv
```

Shows every branch and the remote branch it tracks.

WHEN A PUSH FAILS

Updates were rejected

The remote was created with a README. Run `git pull --rebase origin main`, then push.

Password authentication removed

Use a personal access token, or move the remote to SSH with `git remote set-url`.

src refspec main does not match any

Nothing is committed yet, or the branch has another name. Commit, then check `git branch`.

Permission denied (publickey)

The key is missing from your account or the agent. Run `ssh-add`, then `ssh -T git@github.com`.

remote origin already exists

Update it instead of adding a second: `git remote set-url origin URL`.

Exceeds file size limit of 100 MB

Rewrite history to drop the file. Use Git LFS or object storage instead.

Everything up to date, nothing on GitHub

Staged but never committed, or committed elsewhere. Check `git log --oneline` and `git branch`.

ALWAYS IN .GITIGNORE

```
.env      *.key      *.pem      credentials.json
terraform.tfvars  *.tfstate  .terraform/
node_modules/  __pycache__/  .venv/
.DS_Store
```