

## Signing GitHub Commits – Step by Step

### Option A: Sign commits with SSH (recommended)

1. Generate an SSH key (skip if you already have one):

```
ssh-keygen -t ed25519 -C "your_email@example.com"  
eval "$(ssh-agent -s)"  
ssh-add ~/.ssh/id_ed25519
```

2. Add the public key to GitHub:

```
cat ~/.ssh/id_ed25519.pub
```

GitHub → Settings → SSH and GPG keys → New SSH key

Key type: Signing key

3. Configure Git to use SSH signing:

```
git config --global gpg.format ssh  
git config --global user.signingkey ~/.ssh/id_ed25519.pub  
git config --global commit.gpgsign true
```

4. Create a signed commit:

```
git commit -m "message"
```

5. Verify locally:

```
git log --show-signature -1
```

### Option B: Sign commits with GPG

1. Install GPG:

macOS: brew install gnupg

Ubuntu/Debian: sudo apt-get install gnupg

Windows: install Gpg4win

2. Generate a GPG key:

```
gpg --full-generate-key
```

3. List keys and copy the key ID:

```
gpg --list-secret-keys --keyid-format=long
```

4. Configure Git to sign commits:

```
git config --global user.signingkey YOUR_KEY_ID
```

```
git config --global commit.gpgsign true
```

5. Export the public key and add it to GitHub:

```
gpg --armor --export YOUR_KEY_ID
```

GitHub → Settings → SSH and GPG keys → New GPG key

6. Create a signed commit:

```
git commit -m "message"
```

7. Verify locally:

```
git log --show-signature -1
```