

# Git & GitHub Installation + Linkage Guide

## Step 1: Install Git

Windows:

1. Download Git from: <https://git-scm.com/download/win>
2. Run the installer (use default settings).
3. Open Git Bash from the Start Menu.

macOS:

```
xcode-select --install
```

Ubuntu/Linux:

```
sudo apt update  
sudo apt install git
```

## Step 2: Configure Git (First Time Only)

Run in terminal or Git Bash:

```
git config --global user.name "Your Full Name"  
git config --global user.email "your_email@example.com"
```

(Use the same email as your GitHub account)

## Step 3: Create a GitHub Account

- Visit <https://github.com> and sign up
- Use your university email
- Enable Two-Factor Authentication (2FA) under Settings -> Password & Authentication

## Step 4: Generate SSH Key (Recommended)

Run in terminal or Git Bash:

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

Then:

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

1. Copy the output
2. Go to GitHub -> Settings -> SSH and GPG Keys -> New SSH key
3. Paste and save the key

Test connection:

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

(Expect a successful authentication message)

## **Step 5: Clone a GitHub Repository**

SSH:

```
git clone git@github.com:cs-dept-org/CS1102_2025_SPR_102301_AI_Assignment1.git
```

HTTPS:

```
git clone https://github.com/cs-dept-org/CS1102_2025_SPR_102301_AI_Assignment1.git
```

## **Step 6: Push Changes**

1. Make changes locally
2. Track and commit:

```
git add .
```

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

3. Push to GitHub:

```
git push origin main
```

## **Troubleshooting & Tips**

- Use SSH instead of HTTPS to avoid login prompts
- Use git status often
- Pull changes using:

```
git pull origin main
```