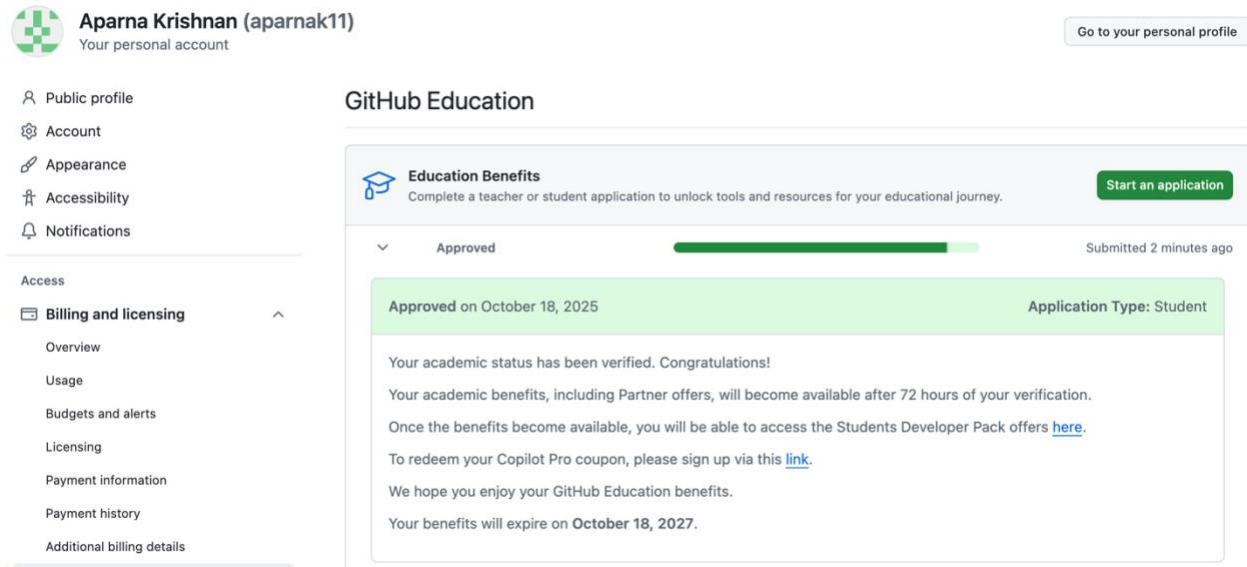


ASTE 404- Homework #4

Aparna Krishnan

Part 1

a)



Aparna Krishnan (aparnak11)
Your personal account

Go to your personal profile

Public profile
Account
Appearance
Accessibility
Notifications

Access

Billing and licensing

Overview
Usage
Budgets and alerts
Licensing
Payment information
Payment history
Additional billing details

GitHub Education

Education Benefits

Complete a teacher or student application to unlock tools and resources for your educational journey.

Start an application

Approved

Submitted 2 minutes ago

Approved on October 18, 2025

Application Type: Student

Your academic status has been verified. Congratulations!

Your academic benefits, including Partner offers, will become available after 72 hours of your verification.

Once the benefits become available, you will be able to access the Students Developer Pack offers [here](#).

To redeem your Copilot Pro coupon, please sign up via this [link](#).

We hope you enjoy your GitHub Education benefits.

Your benefits will expire on October 18, 2027.

- will be sure to access the student developer pack once benefits become available

c) *Was there ever an assignment or project where version control would've been helpful?*

Version control is essential in terms of seeing a change log to the code. I think this would have been very helpful when I was working on some very long MATLAB code and I could see when and why I made the changes I did.

f) There was an issue with authentication failure when trying to do "git push origin main". Workaround was to create an access token through GitHub. Had ChatGPT walk me through the steps for creating an access token.

That error appears because GitHub **no longer supports password authentication** for Git operations. You now have to use either:

✅ Option 1: HTTPS with a Personal Access Token (PAT)

1. Go to your [GitHub → Settings → Developer settings → Personal access tokens → Tokens \(classic\)](#).
2. Click **Generate new token** → **classic**.
3. Give it a name like "MacBook Git".

4. Check these scopes:
 - repo (for private/public repo access)
 - read:org
5. Copy the generated token — you won't see it again.

Then, in your terminal:

```
git clone https://github.com/aparnak11/hello-world.git
Username for 'https://github.com': aparnak11
Password for 'https://aparnak11@github.com': <paste your token here>
```

💡 Tip: You can cache it so you don't have to re-enter:

```
git config --global credential.helper store
```

Then enter the token once; it'll be remembered.

✅ Option 2: Use SSH authentication (recommended long-term)

1. Check if you already have SSH keys:
2. `ls -al ~/.ssh`

If you don't see `id_ed25519.pub` or `id_rsa.pub`, generate one:

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

Press Enter through defaults.

3. Start the SSH agent and add your key:
4. `eval "$(ssh-agent -s)"`
5. `ssh-add ~/.ssh/id_ed25519`
6. Copy your public key:
7. `pbcopy < ~/.ssh/id_ed25519.pub`

Then paste it under **GitHub** → **Settings** → **SSH and GPG keys** → **New SSH key**.

8. Clone using SSH:
9. `git clone git@github.com:aparnak11/hello-world.git`

Would you like me to walk you through setting up the token or the SSH method (recommended for long-term use on your Mac)?

g) Some helpful VS Code + Git notes:

Save the file, then you can have Copilot write the commit message for your staged change and then hit the commit button, which will lead you to the push button.