	School of Engineering & Technology	
	Department: CSE	Session: Odd
	Programme: B.Tech CSE	Semester: 1
	Course Code: ETCCCP105	Number of students:
	Course Name: Computer Science Fundamentals & Career Pathways	Faculty:

Assignment Number 05: Career Planning, Certifications & Industry Readiness

Assignment Title: *Design Your Career Roadmap with SMART Goals*

Submitted By :

Name: Agrima Mishra

Course : B.Tech CSE

Roll no: 2501010207

Git hub link : [CSFCP-Capstone-assignment.git](https://github.com/AgrimaMishra/CSFCP-Capstone-assignment.git)

Step 1: Computational Thinking in Action (CO1)

Problem statement -

A small system that lets a student add study tasks, set a deadline for each task and then shows reminders for upcoming tasks. It allows student to add tasks with deadlines, shows tasks due today or tomorrow, and can mark tasks complete.

What it does in short :

- 1). User adds tasks and deadlines.
- 2). Program stores them.
- 3). Program shows reminders for tasks due soon.
- 4). User can mark tasks done.

Pseudocode –

Start

Create an empty list called TASKS

Repeat forever

Print menu:

1. Add a new study task
2. View all tasks
3. **Show** reminders (tasks due today or tomorrow)
4. Mark a task as completed
5. **Exit** the program

Read the user choice

If choice is 1 then

Print "Enter task : "

Read TASKNAME

Print "Enter deadline (YYYY-MM-DD):"

Read DEADLINE

Create a new task with:

title = TASKNAME

deadline = DEADLINE

status = "pending"

Add the new task to TASKS

Print "Task added successfully"

End If

If choice is 2 then

If TASKS is empty then

Print "No tasks yet"

Else

For each task in TASKS

Print task title, deadline, and status

End For

End If

End If

If choice is 3 then

Get today's date as TODAY

Calculate tomorrow's date as TOMORROW

Set found = false

For each task in TASKS

If task.deadline is equal to TODAY or TOMORROW then

Print "Reminder: ", task.title, " is due on ", task.deadline

 found = true

End If

End For

If found is false then

Print "No tasks due soon"

End If

End If

If choice is 4 then

Print all tasks with numbers

Print "Enter the task number to mark as completed:"

Read INDEX

If INDEX is valid then

 Change the status of TASKS[INDEX] to "completed"

Print "Task marked completed"

 Else

Print "Invalid index"

End If

End If

If choice is 5 then

Break the loop

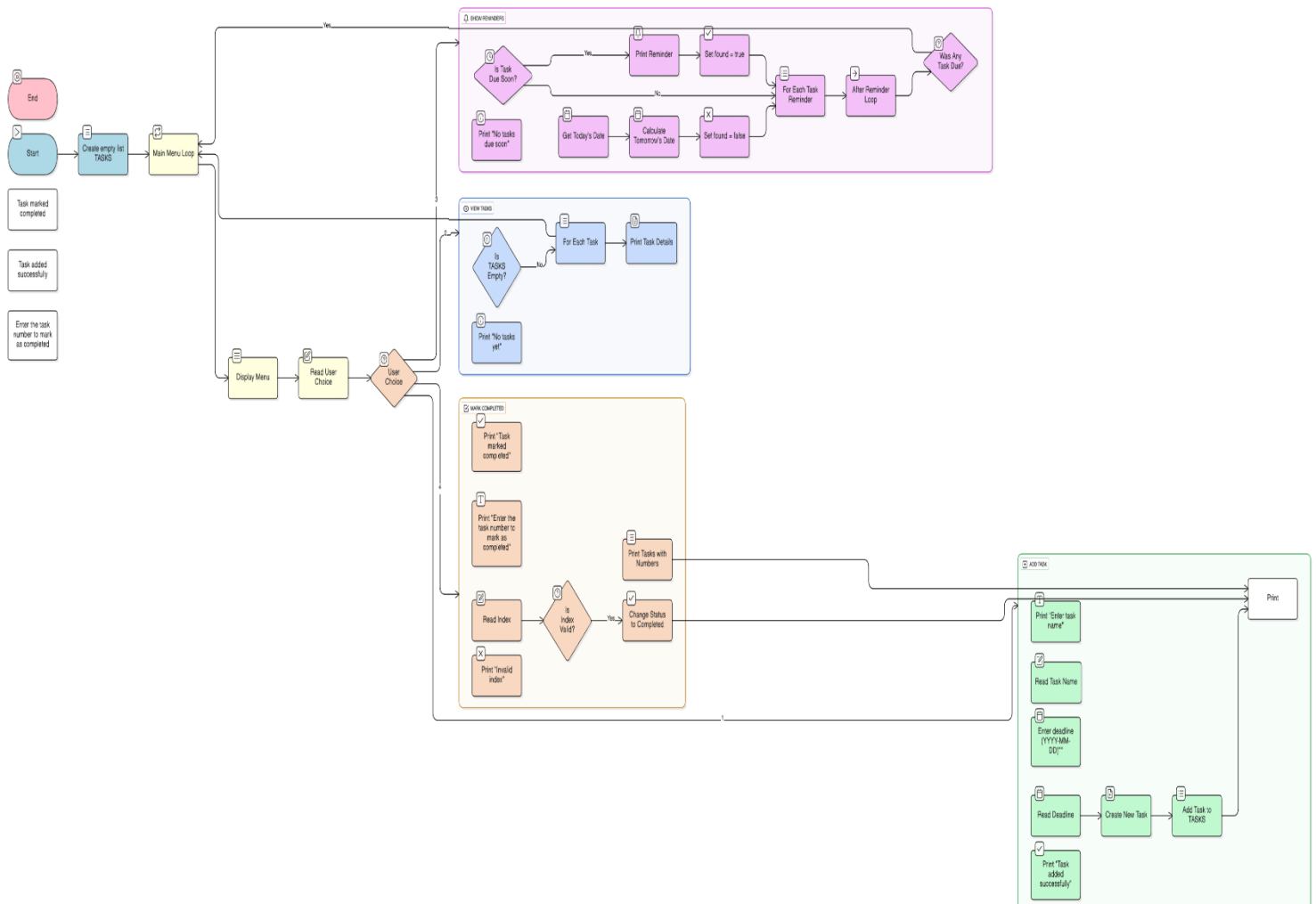
End If

End Repeat

Print "Goodbye"

End

Flowchart –



Step 2 – Linux and Automation Practice (CO2)

1). pwd

```
agrima@AGRIMA: ~  
agrima@AGRIMA:~$ pwd  
/home/agrima  
agrima@AGRIMA:~$ |
```

2). ls

```
agrima@AGRIMA: ~  
agrima@AGRIMA:~$ pwd  
/home/agrima  
agrima@AGRIMA:~$ ls  
backup      backup_dir.sh  monitor_sys.sh  myscript.sh  scripts      sys_monitor_20251118_180023.log  testfolder  
backup.sh   downloads      myscript.c      samplefolder  scriptshell   testfile.txt  
agrima@AGRIMA:~$ |
```

3). Cd

```
agrima@AGRIMA: ~  
agrima@AGRIMA:~$ pwd  
/home/agrima  
agrima@AGRIMA:~$ ls  
backup      backup_dir.sh  monitor_sys.sh  myscript.sh  scripts      sys_monitor_20251118_180023.log  testfolder  
backup.sh   downloads      myscript.c      samplefolder  scriptshell   testfile.txt  
agrima@AGRIMA:~$ cd  
agrima@AGRIMA:~$ |
```

4). Mkdir

```
agrima@AGRIMA: ~  
agrima@AGRIMA:~$ mkdir study  
agrima@AGRIMA:~$ ls -la  
total 92  
drwxr-x--- 12 agrima agrima 4096 Nov 29 15:35 .  
drwxr-xr-x  3 root   root   4096 Nov 18 11:47 ..  
-rw----- 1 agrima agrima 2485 Nov 19 19:20 .bash_history  
-rw-r--r-- 1 agrima agrima  220 Nov 18 11:47 .bash_logout  
-rw-r--r-- 1 agrima agrima 3771 Nov 18 11:47 .bashrc  
drwx----- 2 agrima agrima 4096 Nov 18 11:47 .cache  
drwx----- 3 agrima agrima 4096 Nov 18 12:15 .config  
drwxr-xr-x  7 agrima agrima 4096 Nov 18 18:19 .git  
drwxr-xr-x  3 agrima agrima 4096 Nov 18 12:25 .local  
-rw-rw-r-- 1 agrima agrima   0 Nov 29 15:31 .motd_shown  
-rw-r--r-- 1 agrima agrima  807 Nov 18 11:47 .profile  
-rw-r--r-- 1 agrima agrima   0 Nov 18 11:48 .sudo_as_admin_successful  
-rw-r--r-- 1 agrima agrima  165 Nov 18 18:10 .wget-hsts  
drwxr-xr-x  3 agrima agrima 4096 Nov 18 17:52 backup  
-rw-r-xr-x  1 agrima agrima  374 Nov 18 17:53 backup.sh  
-rwxr-xr-x  1 agrima agrima  751 Nov 18 17:43 backup_dir.sh  
drwxr-xr-x  2 agrima agrima 4096 Nov 18 18:10 downloads  
-rwxr-xr-x  1 agrima agrima  682 Nov 18 17:59 monitor_sys.sh  
-rw-r--r--  1 agrima agrima   70 Nov 18 12:28 myscript.c  
-rwxr-xr-x  1 agrima agrima   70 Nov 18 12:32 myscript.sh  
-rw-r--r--  1 agrima agrima   0 Nov 18 17:46 samplefolder  
drwxr-xr-x  2 agrima agrima 4096 Nov 18 18:08 scripts  
drwxr-xr-x  2 agrima agrima 4096 Nov 18 17:39 scriptshell  
drwxr-xr-x  2 agrima agrima 4096 Nov 29 15:35 study  
-rw-r--r--  1 agrima agrima 3814 Nov 18 18:00 sys_monitor_20251118_180023.log  
-rwxr-xr-x  1 agrima agrima   0 Nov 18 12:08 testfile.txt  
drwxr-xr-x  2 agrima agrima 4096 Nov 18 17:46 testfolder  
agrima@AGRIMA:~$
```

5). Touch notes.txt

```
agrima@AGRIMA: ~  
agrima@AGRIMA:~$ touch notes.txt  
agrima@AGRIMA:~$ ls  
backup      backup_dir.sh  monitor_sys.sh  myscript.sh  samplefolder  scriptshell  sys_monitor_20251118_180023.log  testfolder  
backup.sh   downloads      myscript.c      notes.txt    scripts       study       testfile.txt  
agrima@AGRIMA:~$
```

6). cp notes.txt backup.txt

```
agríma@AGRIMA: ~  
agríma@AGRIMA:~$ cp notes.txt backup.txt  
agríma@AGRIMA:~$ ls -la  
total 92  
drwxr-x--- 12 agríma agríma 4096 Nov 29 15:39 .  
drwxr-xr-x  3 root  root  4096 Nov 18 11:47 ..  
-rw----- 1 agríma agríma 2485 Nov 19 19:20 .bash_history  
-rw-r--r-- 1 agríma agríma  220 Nov 18 11:47 .bash_logout  
-rw-r--r-- 1 agríma agríma 3771 Nov 18 11:47 .bashrc  
drwx----- 2 agríma agríma 4096 Nov 18 11:47 .cache  
drwx----- 3 agríma agríma 4096 Nov 18 12:15 .config  
drwxr-xr-x  7 agríma agríma 4096 Nov 18 18:19 .git  
drwxr-xr-x  3 agríma agríma 4096 Nov 18 12:25 .local  
-rw-rw-r-- 1 agríma agríma    0 Nov 29 15:31 .motd_shown  
-rw-r--r-- 1 agríma agríma  807 Nov 18 11:47 .profile  
-rw-r--r-- 1 agríma agríma    0 Nov 18 11:48 .sudo_as_admin_successful  
-rw-r--r-- 1 agríma agríma  165 Nov 18 18:10 .wget-hsts  
drwxr-xr-x  3 agríma agríma 4096 Nov 18 17:52 backup  
-rw-r--r-- 1 agríma agríma  374 Nov 18 17:53 backup.sh  
-rw-r--r-- 1 agríma agríma    0 Nov 29 15:39 backup.txt  
-rw-r-xr-x  1 agríma agríma  751 Nov 18 17:43 backup_dir.sh  
drwxr-xr-x  2 agríma agríma 4096 Nov 18 18:10 downloads  
-rw-r-xr-x  1 agríma agríma  682 Nov 18 17:59 monitor_sys.sh  
-rw-r--r-- 1 agríma agríma   70 Nov 18 12:28 myscript.c  
-rw-r-xr-x  1 agríma agríma   70 Nov 18 12:32 myscript.sh  
-rw-r--r-- 1 agríma agríma    0 Nov 29 15:37 notes.txt  
-rw-r--r-- 1 agríma agríma    0 Nov 18 17:46 samplefolder  
drwxr-xr-x  2 agríma agríma 4096 Nov 18 18:08 scripts  
drwxr-xr-x  2 agríma agríma 4096 Nov 18 17:39 scriptshell  
drwxr-xr-x  2 agríma agríma 4096 Nov 29 15:35 study  
-rw-r--r-- 1 agríma agríma 3814 Nov 18 18:00 sys_monitor_20251118_180023.log  
-rw-r-xr-x  1 agríma agríma    0 Nov 18 12:08 testfile.txt  
drwxr-xr-x  2 agríma agríma 4096 Nov 18 17:46 testfolder  
agríma@AGRIMA:~$
```

7). mv backup.txt study/

```
agríma@AGRIMA: ~  
agríma@AGRIMA:~$ touch backup.txt  
agríma@AGRIMA:~$ ls  
backup      backup.txt      downloads      myscript.c      samplefolder    scriptshell     sys_monitor_20251118_180023.log  testfolder  
backup.sh   backup_dir.sh   monitor_sys.sh myscript.sh      scripts         study          testfile.txt  
agríma@AGRIMA:~$ mv backup.txt study/  
agríma@AGRIMA:~$ ls  
backup      backup_dir.sh   monitor_sys.sh myscript.sh      scripts         study          testfile.txt  
backup.sh   downloads       myscript.c     samplefolder     scriptshell     sys_monitor_20251118_180023.log  testfolder  
agríma@AGRIMA:~$ ls study/  
backup.txt  
agríma@AGRIMA:~$
```

8). rm notes.txt

```
agríma@AGRIMA: ~  
agríma@AGRIMA:~$ touch notes.txt  
agríma@AGRIMA:~$ ls  
backup      backup_dir.sh   monitor_sys.sh myscript.sh      samplefolder    scriptshell     sys_monitor_20251118_180023.log  testfolder  
backup.sh   downloads       myscript.c     notes.txt        scripts         study          testfile.txt  
agríma@AGRIMA:~$ rm notes.txt  
agríma@AGRIMA:~$ ls  
backup      backup_dir.sh   monitor_sys.sh myscript.sh      samplefolder    scriptshell     sys_monitor_20251118_180023.log  testfolder  
backup.sh   downloads       myscript.c     samplefolder     scriptshell     sys_monitor_20251118_180023.log  testfolder  
agríma@AGRIMA:~$
```


9). chmod 755 study

```
agrima@AGRIMA: ~  
agrima@AGRIMA:~$ ls -l  
total 48  
drwxr-xr-x 3 agrima agrima 4096 Nov 18 17:52 backup  
-rwxr-xr-x 1 agrima agrima 374 Nov 18 17:53 backup.sh  
-rwxr-xr-x 1 agrima agrima 751 Nov 18 17:43 backup_dir.sh  
drwxr-xr-x 2 agrima agrima 4096 Nov 18 18:10 downloads  
-rwxr-xr-x 1 agrima agrima 682 Nov 18 17:59 monitor_sys.sh  
-rw-r--r-- 1 agrima agrima 70 Nov 18 12:28 myscript.c  
-rwxr-xr-x 1 agrima agrima 70 Nov 18 12:32 myscript.sh  
-rw-r--r-- 1 agrima agrima 0 Nov 18 17:46 samplefolder  
drwxr-xr-x 2 agrima agrima 4096 Nov 18 18:08 scripts  
drwxr-xr-x 2 agrima agrima 4096 Nov 18 17:39 scriptshell  
drwxr-xr-x 2 agrima agrima 4096 Nov 29 15:51 study  
-rw-r--r-- 1 agrima agrima 3814 Nov 18 18:00 sys_monitor_20251118_180023.log  
-rwxr-xr-x 1 agrima agrima 0 Nov 18 12:08 testfile.txt  
drwxr-xr-x 2 agrima agrima 4096 Nov 18 17:46 testfolder  
agrima@AGRIMA:~$ chmod 755 study  
agrima@AGRIMA:~$ ls -l  
total 48  
drwxr-xr-x 3 agrima agrima 4096 Nov 18 17:52 backup  
-rwxr-xr-x 1 agrima agrima 374 Nov 18 17:53 backup.sh  
-rwxr-xr-x 1 agrima agrima 751 Nov 18 17:43 backup_dir.sh  
drwxr-xr-x 2 agrima agrima 4096 Nov 18 18:10 downloads  
-rwxr-xr-x 1 agrima agrima 682 Nov 18 17:59 monitor_sys.sh  
-rw-r--r-- 1 agrima agrima 70 Nov 18 12:28 myscript.c  
-rwxr-xr-x 1 agrima agrima 70 Nov 18 12:32 myscript.sh  
-rw-r--r-- 1 agrima agrima 0 Nov 18 17:46 samplefolder  
drwxr-xr-x 2 agrima agrima 4096 Nov 18 18:08 scripts  
drwxr-xr-x 2 agrima agrima 4096 Nov 18 17:39 scriptshell  
drwxr-xr-x 2 agrima agrima 4096 Nov 29 15:51 study  
-rw-r--r-- 1 agrima agrima 3814 Nov 18 18:00 sys_monitor_20251118_180023.log  
-rwxr-xr-x 1 agrima agrima 0 Nov 18 12:08 testfile.txt  
drwxr-xr-x 2 agrima agrima 4096 Nov 18 17:46 testfolder  
agrima@AGRIMA:~$ |
```

10). rmdir study

```
agrima@AGRIMA: ~  
agrima@AGRIMA:~$ rm study/backup.txt  
agrima@AGRIMA:~$ ls study/  
agrima@AGRIMA:~$ rmdir study  
agrima@AGRIMA:~$ ls  
backup    backup_dir.sh  monitor_sys.sh  myscript.sh  scripts    sys_monitor_20251118_180023.log  testfolder  
backup.sh  downloads     myscript.c      samplefolder  scriptshell  testfile.txt  
agrima@AGRIMA:~$ |
```

Bash Script

- **career-folder-creator.sh**

this script automatically creates folders for your studies.

```
agrima@AGRIMA: ~  
agrima@AGRIMA:~$ nano career-folder-creator.sh
```

```
GNU nano 7.2 career-folder-creator.sh  
#!/bin/bash  
  
echo "making career folders..."  
mkdir -p Career/Certifications  
mkdir -p Career/Projects  
mkdir -p Career/Notes  
mkdir -p Career/Resumes  
mkdir -p Career/LinkedIn  
  
echo "done. folders created."
```

```
agrima@AGRIMA: ~  
agrima@AGRIMA:~$ nano career-folder-creator.sh  
agrima@AGRIMA:~$ chmod +x career-folder-creator.sh
```

```
agrima@AGRIMA: ~  
agrima@AGRIMA:~$ nano career-folder-creator.sh  
agrima@AGRIMA:~$ chmod +x career-folder-creator.sh  
agrima@AGRIMA:~$ ./career-folder-creator.sh
```

agrima@AGRIMA: ~

×

+

▼

```
agrima@AGRIMA:~$ nano career-folder-creator.sh
agrima@AGRIMA:~$ chmod +x career-folder-creator.sh
agrima@AGRIMA:~$ ./career-folder-creator.sh
making career folders...
done. folders created.
agrima@AGRIMA:~$ |
```

agrima@AGRIMA: ~

×

+

▼

```
agrima@AGRIMA:~$ nano career-folder-creator.sh
agrima@AGRIMA:~$ chmod +x career-folder-creator.sh
agrima@AGRIMA:~$ ./career-folder-creator.sh
making career folders...
done. folders created.
agrima@AGRIMA:~$ ls Career/
Certifications LinkedIn Notes Projects Resumes
agrima@AGRIMA:~$ |
```

Step 3 - Exploring Emerging Technology Domain (CO3) (infographic)



Step 4 - Career Planning & Professional Readiness (CO4)

Step 1.1 - SMART GOALS

1. Short Term Goal

Goal:

I want to understand the basic concepts of cybersecurity and complete one beginner level certification.

Breakdown:

- **Specific:** learn topics like types of attacks, passwords, malware, basic networking and security tools
 - **Measurable:** finish one beginner friendly certification like Google Cybersecurity or IBM Cybersecurity
 - **Achievable:** I will study around 30 minutes a day because that feels realistic for me
 - **Relevant:** This will help me get comfortable with the field i want to go into
 - **Time Bound:** I want to complete this within the next **4 to 6 months**
-

2. Medium Term Goal

Goal:

I want to make a small cybersecurity related project and upload it on GitHub so i can slowly start building my skills and confidence.

Breakdown:

- **Specific:** Create a simple project like a password strength checker or a basic log analyzer
 - **Measurable:** One working project uploaded publicly on my GitHub
 - **Achievable:** I will practice on weekends and watch tutorials to understand how to build it
 - **Relevant:** Having a project will strengthen my profile and help me learn practically
 - **Time Bound:** I want to finish this in the next **8 to 10 months**
-

3. Long Term Goal

Goal:

I want to prepare myself for an entry level role like cybersecurity analyst or SOC analyst because that feels like a realistic start for me and matches the domain I am interested in.

Breakdown:

- **Specific:** Learn tools like Linux, Wireshark, basic scripting and SIEM concepts
- **Measurable:** Finish at least two certifications and two beginner projects

- **Achievable:** I will keep learning regularly and try to join workshops or hackathons whenever possible
- **Relevant:** This will help me move closer to an actual job role in cybersecurity
- **Time bound:** I want to achieve this by **the end of my second year**

Step 2: Certification Research

Certification 1: Google Cybersecurity Certificate (Coursera)

Name and Provider:

Google Cybersecurity Professional Certificate, available on Coursera

Duration:

around 4 to 6 months if I study regularly for about 6 to 8 hours per week

Cost:

around 1k to 2k per month on Coursera subscription (depends on offers). sometimes financial aid is also available.

Skills Covered:

- basics of cybersecurity
- common threats
- network security basics
- linux commands
- security tools like SIEM
- incident response
- foundations of security analysis

How it aligns with my SMART goals:

This is perfect for my short term goal because I want to build a basic understanding of cybersecurity. It explains everything from the start, so even as a first year student I won't feel lost. It also helps with my long term goal of becoming a cybersecurity analyst or SOC analyst since it teaches tools and tasks related to those roles.

Certification 2: IBM Cybersecurity Analyst Certificate (Coursera)

Name and Provider:

IBM Cybersecurity Analyst Professional Certificate, Coursera

Duration:

Around 6 to 8 months with regular practice

Cost:

Same Coursera subscription, around 1k to 2k monthly depending on discounts

Skills Covered:

- network security
- threat intelligence
- intrusion detection
- incident handling
- SIEM tools


- malware basics
- hands on labs and exercises

How it aligns with my SMART goals:


This certification matches my medium and long term goals because it goes deeper into analyst skills. Since I want to eventually prepare for SOC analyst or cybersecurity analyst roles, this certification gives practical experience and makes my resume stronger. It also helps me move toward completing two certifications, which I mentioned in my long term goal.

Step 3: LinkedIn Update

My LinkedIn Profile link : [Linkedin Profile AM207](https://www.linkedin.com/in/agrima-mishra-957481381)



[Home](#) [My Network](#) [Jobs](#) [Messaging](#) [Notifications](#) [Me](#) [For Business](#) [Try Premium for ₹0](#)



AGRIMA MISHRA

@AGRIMAMISHRA288·TECH

Agrima Mishra She/Her [Add verification badge](#)

BTech CSE student | Interested in cybersecurity and core CS | Learning step by step

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www.linkedin.com/in/agrima-mishra-957481381

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About

Greetings of the day, Thank you for stopping by my profile. I am a first year BTech CSE student trying to understand the core areas of computer science. Currently I am focusing on learning the basics like programming, problem solving, how computer systems actually work. I am still new but I enjoy trying small beginner tasks and exploring different concepts to see what interests me. I want to grow my skills slowly and build a strong foundation step by step towards the future I desire for myself.

Activity

9 followers


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Education



K.R. Mangalam University

Bachelor of Technology - BTech, Computer Science Engineering

Aug 2025 - Jun 2029

HTML, Microsoft Excel and +3 skills

Skills

[+](#) [Edit](#)



Agrima Mishra (She/Her)

BTech CSE student | Interested in cybersecurity and core CS | Learning step by step



Skills



All

Industry Knowledge

Tools & Technologies

Interpersonal Skills

Linux



K.R. Mangalam University



Teamwork



K.R. Mangalam University



HTML



K.R. Mangalam University



Computer Literacy



K.R. Mangalam University



Microsoft Excel



K.R. Mangalam University



Promoted ...

HOBBYWING UAV Propulsion

Follow us for innovation solutions & technologies

Trusted by global drone marketing and engineering

Follow

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Someone at K.R.
Mangalam University

View



Someone at K.R.
Mangalam University

View



Founder in the IT Services
and IT...

View



Messaging



CV

AGRIMA MISHRA



CONTACT

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agrimamishra288@gmail.com

Lucknow, Uttar Pradesh

www.linkedin.com/in/agrima-mishra-957481381

SKILLS

- Linux Basics
- HTML
- Teamwork
- Computer Literacy
- Microsoft Excel
- Problem Solving
- Time Management

LANGUAGES

- English (Fluent)
- French (Beginner)
- Italian (Beginner)
- German (Basic)
- Hindi (Fluent)



PROFILE

I am a first year BTech CSE student trying to build a basic foundation in core computer science. I am exploring programming and cybersecurity slowly through my classes, assignments and small tasks. I want to grow my skills step by step and prepare myself for beginner opportunities in the future.



WORK EXPERIENCE

Linux Practice Tasks 2025

Beginner Project

- Practiced basic Linux commands like ls, cd, mkdir, touch
- Explored file permissions using chmod
- Learned simple directory management

Bash Automation Script 2025

Beginner Task

- created a small script to automatically generate folders
- used commands like echo, mkdir, chmod
- learned how scripts make repeated work easier

Fraud - detection system 2025

Manthan AI Hackathon with Second year

- practiced using simple conditional logic to detect irregular or fake transactions
- understood concepts like thresholds, anomalies and pattern checking
- worked with sample datasets to test how fraud alerts are generated
- worked with CSV data to analyze transactions for possible fraud
- applied basic filters and conditions to identify suspicious entries



EDUCATION

Bachelors of Technology (BTech), Computer Science Engineering 2025 - 2029

K. R. Mangalam University

School of Engineering and technology

Step 4: Hackathon / Open-Source Participation Plan

GirlScript Summer of Code (GSSoC)

Program Type:

Open-source development and contribution program

Planned Participation:

GSSoC 2026

Why I Chose GSSoC

GSSoC feels like the right place for me because it is welcoming to beginners and gives students a chance to explore coding and open-source at their own pace. Even with basic skills, there are small issues to work on, helpful mentors, and a supportive community. It honestly feels like a safe space to learn, experiment and slowly grow.

My Preparation Plan

1. foundation building

I am focusing on understanding simple things first like Git, GitHub, basic commands, how repositories work, and how issues are structured. I want to be comfortable with the basics before contributing.

2. exploring beginner-friendly projects

I plan to browse through past GSSoC repositories and look for issues marked “good first issue”. this helps me understand what type of tasks beginners usually start with.

3. practicing open-source workflows

I will practice cloning repos, creating branches, making small changes, writing clear commit messages and opening pull requests. Even tiny improvements like fixing typos or updating a README matter.

4. joining community spaces

I will join Discord or Telegram groups for updates, discussions and beginner guidance. Being around others who are also learning makes the experience less stressful and more motivating.

5. setting realistic goals

My aim is to complete at least 2 to 3 simple contributions. I want to start small, learn the process and slowly build confidence instead of rushing into advanced tasks.

Future Intent

I want to use GSSoC as a gentle introduction to real-world projects. through this, I hope to improve my understanding of coding, teamwork, communication and version control. It matches my goal of growing step by step and discovering where I fit in the tech space.

Career Roadmap

As a first year BTech CSE student, I am still exploring and trying to understand where I fit in the large world of computer science, right now I feel drawn toward core CS subjects and cybersecurity because they make me curious. I want to build my skills slowly and not overwhelm myself. This roadmap explains how I want to grow step by step through the next few years in college, focusing on my skills, certifications, projects and future goals. It is a simple plan but I want to follow it with consistency.

Year 1: building my foundation

My main focus in the first year is to understand the basics of computer science. I want to learn programming fundamentals, basic Linux commands and how computer systems work. even though everything feels very new, I try to practice small tasks like file management, simple scripts and basic problem solving. I also want to get comfortable with Python and HTML because these are beginner friendly.

In this year, I plan to complete at least one beginner level certification the Google Cybersecurity Certificate or IBM Cybersecurity Analyst Certificate are two that I am considering, even completing one will give me confidence. I also want to do at least one simple project like a password strength checker or a small automation script. I know these projects are very basic but they will help me understand how to apply what I learn.

My goal in year 1 is to explore and not pressure myself. I want to stay curious and learn at my pace.

Year 2: focusing on skills and small projects

In the second year I want to deepen my understanding of core subjects like data structures, operating systems and computer networks. these subjects are important for cybersecurity and almost every technical job. I also want to start exploring tools used in cybersecurity like Wireshark, Nmap and basic concepts of networking security.

I will try to do at least two small projects this year. one could be related to networking or log analysis and another could be a beginner cybersecurity tool. I also want to upload my work on GitHub so that I slowly build an online presence.

In year 2, I want to complete at least one more certification, maybe CompTIA Security Plus or Microsoft Azure AI Fundamentals. these certifications will support my long term goal of becoming a cybersecurity analyst or working in a SOC team.

I want to also participate in programs like GirlScript Summer of Code to get a small taste of open source.

Year 3: practical learning and internships

By the third year, I want to be more confident with my technical foundation. This is the year where I want to focus on internships or training opportunities, even a small internship or

training will give me real experience. I want to learn how companies handle security, how teams work and how tools are used in real life.

I also want to start working on a medium level project. maybe something related to fraud detection, network monitoring or a simple detection system. I want to learn how to document a project, how to show results and how to present my work properly.

I also want to attend workshops, tech events and hackathons to develop confidence and communication skills.

Year 4: preparing for the professional world

in the fourth year, I want to fully focus on preparing myself for entry level roles. I want to polish my resume, LinkedIn and GitHub. I want to take advanced certifications if needed and complete my final year project in a field related to cybersecurity or core CS.

I want to apply for roles like cybersecurity analyst, SOC analyst, junior network security engineer or any beginner position that matches my skills. I will also try to participate in campus placements and keep learning continuously.

Long term vision

my long term vision is to slowly grow in the cybersecurity field and work on real world problems. I want to gain experience, improve my technical skills and understand this domain deeply. I know the journey will take time but I want to stay patient and keep learning.

overall, this roadmap helps me stay focused and reminds me that growth takes place step by step. I want to make the most of my time in college and work toward building a strong foundation for my future career.

Reflection

Working on this assignment was a bit challenging for me because I am still in my first year and a lot of things were new. I struggled the most with understanding linux commands in the beginning and creating the algorithm and flowchart because I never made one before. the infographic and linkedIn part also felt confusing at first since I was not sure what to add or how to present myself in a proper way. but slowly when I started doing each step one by one, it became much easier.

While completing this assignment, I feel like I improved a few skills. I learned how linux commands actually work and how to run a simple bash script. I also got better at explaining ideas in simple words and organizing my thoughts. creating my linkedin profile helped me understand how to present myself professionally even as a beginner. exploring certifications and planning my career roadmap made me think more seriously about what I want to do in the future.

Overall, this assignment helped me understand my field better and showed me how important it is to keep learning small things every day. I will try to apply everything I learned here in my academic journey and slowly build my confidence and skills for my professional future.