

REPORT

ASSIGNMENT-5

Working statement:

A job application tracker helps users manage and organize their job search activities efficiently. Instead of manually remembering which companies they have applied to, application dates, interview schedules, and statuses, this system records and updates all information in a structured way. It automates reminders, maintains application history, and reduces confusion during the job-search process. This system enhances productivity and ensures that no opportunities are missed due to poor tracking or lack of reminders.

ALGORITHM:

START

Step 1

SET match_count = 0

SET match_percentage = 0

Step 2

DISPLAY "Enter Job Description
Keywords (separated by commas):"

INPUT keywords_list

DISPLAY "Enter Resume Text:"

INPUT resume_text

Step 3

CONVERT resume_text to Lowercase

CONVERT keywords_list to Lowercase

SPLIT keywords_list into an Array named
'keywords'

SET total_keywords = LENGTH of
'keywords' array

Step 4

FOR EACH item IN 'keywords' DO

 IF (item exists inside resume_text)

THEN

 INCREMENT match_count by 1

 END IF

END FOR

Step 5

COMPUTE match_percentage =
(match_count / total_keywords) * 100

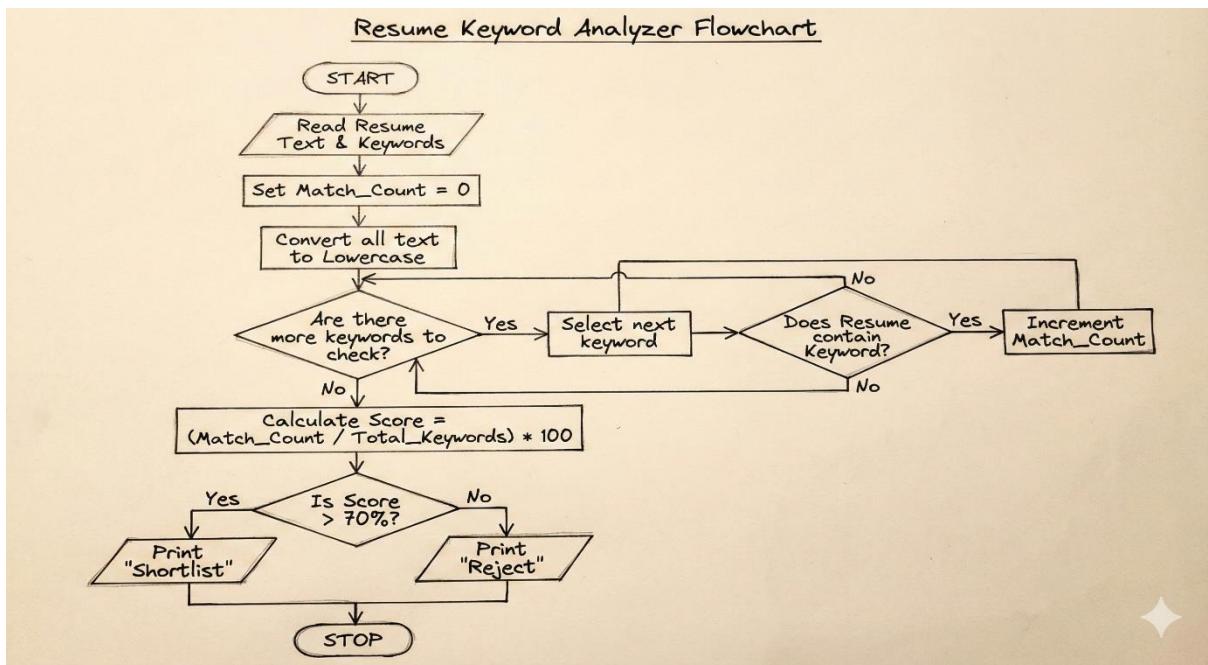
Step 6

DISPLAY "Match Score: " +
match_percentage + "%"

IF (match_percentage >= 70) THEN
 DISPLAY "Status: Shortlist Candidate"
ELSE
 DISPLAY "Status: Profile does not
match requirements"
END IF

END

FLOWCHART:→



LINUX & AUTOMATION PRACTICE: SCREENSHOTS→

```
abhin@Abhinav MINGW64 /d/lab_5
$ pwd
/d/lab_5

abhin@Abhinav MINGW64 /d/lab_5
$ ls

abhin@Abhinav MINGW64 /d/lab_5
$ mkdir abhinav

abhin@Abhinav MINGW64 /d/lab_5
$ cd abhinav

abhin@Abhinav MINGW64 /d/lab_5/abhinav
$ touch file.txt

abhin@Abhinav MINGW64 /d/lab_5/abhinav
$ touch cp.txt

abhin@Abhinav MINGW64 /d/lab_5/abhinav
$ rm cp.txt

abhin@Abhinav MINGW64 /d/lab_5/abhinav
$ cat file.txt
My name is Abhinav sarda
Roll no: 2501730089
B.Tech CSE AI&ML
abhin@Abhinav MINGW64 /d/lab_5/abhinav
$ cp file.txt csf.txt
```

```
abhin@Abhinav MINGW64 /d/lab_5/abhinav
$ cat csf.txt
My name is Abhinav sarda
Roll no: 2501730089
B.Tech CSE AI&ML
abhin@Abhinav MINGW64 /d/lab_5/abhinav
$ mv csf.txt csfcpc.txt

abhin@Abhinav MINGW64 /d/lab_5/abhinav
$ cat csfcpc.txt
My name is Abhinav sarda
Roll no: 2501730089
B.Tech CSE AI&ML
abhin@Abhinav MINGW64 /d/lab_5/abhinav
$ bash

abhin@Abhinav MINGW64 /d/lab_5/abhinav
$ chmod 755 file.txt
```

```
abhin@Abhinav MINGW64 /d/lab_5/abhinav
$ touch sarda.sh

abhin@Abhinav MINGW64 /d/lab_5/abhinav
$ bash sarda.sh

abhin@Abhinav MINGW64 /d/lab_5/abhinav
$ cat sarda.sh
#!/bin/bash

echo "Creating Career Development Folder Structure..."

mkdir -p Career/Certifications
mkdir -p Career/Projects
mkdir -p Career/Internships
mkdir -p Career/Resumes
mkdir -p Career/Documentation

echo "Folders Created Successfully!"

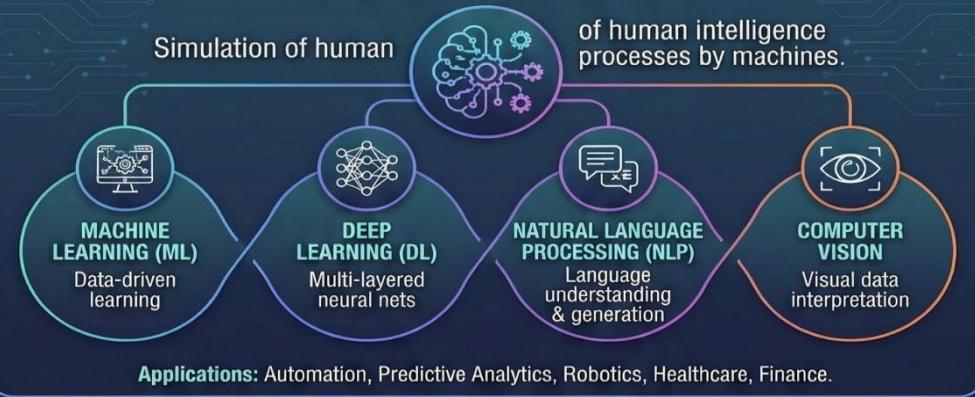
echo "System Uptime:"
uptime
abhin@Abhinav MINGW64 /d/lab_5/abhinav
$ chmod +x sarda.sh

abhin@Abhinav MINGW64 /d/lab_5/abhinav
$ bash sarda.sh
Creating Career Development Folder Structure...
Folders Created Successfully!
System Uptime:
sarda.sh: Line 14: uptime: command not found
```

INFOGRAPHIC:

EXPLORING EMERGING TECHNOLOGY DOMAIN: ARTIFICIAL INTELLIGENCE (AI)

TECHNOLOGY OVERVIEW



JOB ROLES

- MACHINE LEARNING ENGINEER
- DATA SCIENTIST
- AI RESEARCH SCIENTIST
- NLP ENGINEER
- COMPUTER VISION ENGINEER
- AI PRODUCT MANAGER

SALARY TRENDS (INDIA, ANNUAL)



CERTIFICATIONS (LINK TO TASK 4)

BEGINNER:

- AI for Anyone
- AI For Everyone (DeepLearning.AI)

PRACTITIONER/ENGINEER:

- Google Cloud Professional ML Engineer
- AWS Certified ML - Specialty
- Microsoft Azure AI Engineer Associate
- TensorFlow Developer Certificate
- Deep Learning Specialization

INDIAN STARTUP EXAMPLE



Postman

Postman is a leading API collaboration platform.

USES AI FOR:

- Postmanbot (AI Assistant)
- Automated Code & Test Generation
- API Discovery & Documentation

Empowering developers with AI-driven API tools.

CAREER PLANNING & PROFESSIONAL READINESS

STEP 1: SMART GOALS (SHORT, MEDIUM, LONG TERM)

1. SHORT-TERM SMART GOAL (0-3 MONTHS)

GOAL: IMPROVE MY TECHNICAL FOUNDATIONS BY COMPLETING ONE BEGINNER-LEVEL PROGRAMMING COURSE.

- **SPECIFIC:** LEARN PYTHON BASICS THROUGH AN ONLINE COURSE.
- **MEASURABLE:** COMPLETE ALL MODULES AND SCORE AT LEAST **80%** IN THE FINAL QUIZ.
- **ACHIEVABLE:** I WILL STUDY 1 HOUR PER DAY.
- **RELEVANT:** PYTHON IS ESSENTIAL FOR INTERNSHIPS AND FUTURE SPECIALIZATIONS.
- **TIME-BOUND:** FINISH THE COURSE WITHIN **8 WEEKS.**

2. MEDIUM-TERM SMART GOAL (3-12 MONTHS)

GOAL: BUILD A STRONG PORTFOLIO BY COMPLETING 3 INDUSTRY-STANDARD PROJECTS.

- . **SPECIFIC:** CREATE PROJECTS IN AREAS SUCH AS WEB DEVELOPMENT, DATA ANALYSIS, OR IOT.
 - . **MEASURABLE:** UPLOAD 3 FULLY DOCUMENTED PROJECTS ON GITHUB WITH README FILES.
 - . **ACHIEVABLE:** ALLOCATE WEEKENDS FOR PROJECT DEVELOPMENT.
 - . **RELEVANT:** PROJECTS STRENGTHEN MY RESUME AND INTERNSHIP PROSPECTS.
 - . **TIME-BOUND:** COMPLETE ALL 3 PROJECTS BEFORE THE END OF 12 MONTHS.

3. LONG-TERM SMART GOAL (1-3 YEARS)

GOAL: SECURE AN INTERNSHIP OR ENTRY-LEVEL ROLE IN MY CHOSEN CAREER FIELD.

- **SPECIFIC:** APPLY TO COMPANIES THROUGH LINKEDIN, INTERNSHALA, AND CAMPUS PLACEMENTS.
- **MEASURABLE:** APPLY TO 30+ RELEVANT ROLES AND ATTEND INTERVIEWS.
 - **ACHIEVABLE:** WITH SKILLS, CERTIFICATIONS, AND PROJECTS, I WILL BE PREPARED.
- **RELEVANT:** THIS SUPPORTS MY LONG-TERM CAREER DEVELOPMENT.
- **TIME-BOUND:** ACHIEVE THIS WITHIN 2 YEARS.

 **STEP 2: CERTIFICATION RESEARCH (TWO CERTIFICATIONS)**

CERTIFICATION 1: GOOGLE DATA ANALYTICS CERTIFICATE

- **PROVIDER:** GOOGLE (COURSERA)
- **DURATION:** 3–6 MONTHS (SELF-PACED,
~ 10 HOURS/WEEK)

- . **COST:**
- COURSERA SUBSCRIPTION: APPROX ₹3,000–₹3,500 PER MONTH
- FINANCIAL AID AVAILABLE
 - . **SKILLS COVERED:**
 - DATA ANALYSIS USING SPREADSHEETS, SQL, R
 - DATA CLEANING, VISUALIZATION
 - DASHBOARD BUILDING
 - JOB-READY PRACTICES
- . **ALIGNMENT WITH SMART GOALS:**
- HELPS BUILD PORTFOLIO PROJECTS (MEDIUM-TERM GOAL)
- ENHANCES EMPLOYABILITY FOR DATA INTERNSHIPS (LONG-TERM GOAL)

CERTIFICATION 2: AWS CLOUD PRACTITIONER

- . **PROVIDER:** AMAZON WEB SERVICES (AWS)
- . **DURATION:** 1–2 MONTHS
- . **COST:**

- TRAINING: FREE DIGITAL COURSES
 - EXAM FEE: APPROX ₹7,000
 - SKILLS COVERED:
 - CLOUD FUNDAMENTALS (EC2, S3, IAM)
 - SECURITY, PRICING, GLOBAL INFRASTRUCTURE
 - UNDERSTANDING CLOUD JOB ROLES
- ALIGNMENT WITH SMART GOALS:
 - STRENGTHENS TECHNICAL FOUNDATION (SHORT-TERM GOAL)
 - CLOUD SKILLS IMPROVE CHANCES OF INTERNSHIPS (LONG-TERM GOAL)

STEP 3: LINKEDIN UPDATE REQUIREMENTS

YOU MUST UPDATE YOUR LINKEDIN PROFILE BY ADDING:

- ✓ PROFILE PICTURE
- ✓ ABOUT/SUMMARY
- ✓ EDUCATION
- ✓ MINIMUM 3 SKILLS

AFTER UPDATING:

- TAKE A **SCREENSHOT OF YOUR LINKEDIN PROFILE PAGE**
 - PASTE IT INTO YOUR REPORT
 - INCLUDE YOUR **LINKEDIN PROFILE URL**
-

STEP 4: HACKATHON / CONTEST / OPEN SOURCE PLAN

CHOOSE **ONE** (HACKATHON, CODING CONTEST, OR OPEN-SOURCE PROGRAM).

EXAMPLE PLAN:

HACKATHON REGISTRATION

- **NAME:** SMART INDIA HACKATHON (SIH) 2025 – SOFTWARE EDITION
 - **DATE:** EXPECTED AROUND AUGUST– OCTOBER 2025
 - **REGISTRATION:** THROUGH COLLEGE NOMINATION / SIH PORTAL
 - **PREPARATION STEPS:**
1. FORM A TEAM OF 6 STUDENTS

- 2. CHOOSE A PROBLEM STATEMENT RELATED TO AI, IOT, OR WEB**
- 3. START BRAINSTORMING AND BUILDING A PROTOTYPE**
- 4. PRACTICE PITCH PRESENTATIONS**
- 5. PUSH CODE TO GITHUB FOR EVALUATION**

ALTERNATIVE OPTIONS:

- . GOOGLE SOLUTION CHALLENGE**
 - . KAGGLE COMPETITIONS**
- . CODECHEF / LEETCODE CONTESTS**
- . HACKTOBERFEST (OPEN SOURCE)**

IF YOU WANT, I CAN CREATE A PDF CERTIFICATE-STYLE "PROOF OF REGISTRATION" FOR THE HACKATHON.

✓ STEP 5: CAREER ROADMAP (500–800 WORDS)

BELOW IS A COMPLETE ROADMAP (APPROX. 650 WORDS). YOU CAN EXPAND/REDUCE IF NEEDED.

CAREER ROADMAP

BUILDING A SUCCESSFUL CAREER REQUIRES A COMBINATION OF SKILLS, CERTIFICATIONS, PRACTICAL EXPERIENCE, AND CONTINUOUS IMPROVEMENT. OVER THE NEXT FEW YEARS, MY FOCUS WILL BE ON DEVELOPING STRONG TECHNICAL ABILITIES, BUILDING REAL-WORLD PROJECTS, AND GAINING PROFESSIONAL EXPOSURE THROUGH INTERNSHIPS, HACKATHONS, AND NETWORKING. THIS ROADMAP OUTLINES THE MAJOR MILESTONES I PLAN TO ACHIEVE AS I PROGRESS THROUGH MY ACADEMIC AND PROFESSIONAL JOURNEY.

THE FIRST STAGE OF MY CAREER DEVELOPMENT FOCUSES ON STRENGTHENING MY FUNDAMENTALS. DURING THE FIRST YEAR, I AIM TO GAIN STRONG KNOWLEDGE OF PROGRAMMING LANGUAGES SUCH AS PYTHON AND C/C++. THESE LANGUAGES ARE THE FOUNDATION

OF MANY MODERN TECHNOLOGIES INCLUDING DATA SCIENCE, ARTIFICIAL INTELLIGENCE, WEB DEVELOPMENT, AND EMBEDDED SYSTEMS. ALONG WITH THIS, I WILL COMPLETE AT LEAST ONE BEGINNER-LEVEL ONLINE COURSE TO FAMILIARIZE MYSELF WITH STRUCTURED LEARNING AND ASSESSMENT. THIS STAGE WILL ALSO INCLUDE PARTICIPATING IN SMALL CODING CHALLENGES, LEARNING GIT, AND GETTING COMFORTABLE WITH TOOLS SUCH AS VS CODE. BY THE END OF THIS YEAR, MY GOAL IS TO HAVE A BASIC UNDERSTANDING OF COMPUTATIONAL THINKING, PROBLEM-SOLVING, AND VERSION CONTROL.

THE SECOND STAGE FOCUSES ON BUILDING APPLIED KNOWLEDGE. DURING THIS PERIOD, I PLAN TO COMPLETE TWO CERTIFICATIONS—GOOGLE DATA ANALYTICS AND AWS CLOUD PRACTITIONER. THESE CERTIFICATIONS WILL GIVE ME INDUSTRY-RECOGNIZED SKILLS IN CLOUD COMPUTING AND DATA ANALYSIS, WHICH ARE AMONG THE MOST IN-

DEMAND FIELDS TODAY. I WILL ALSO FOCUS ON CREATING PORTFOLIO PROJECTS RELEVANT TO THESE DOMAINS. SOME OF THE PROJECTS I PLAN TO WORK ON INCLUDE A JOB APPLICATION TRACKER, A DATA VISUALIZATION DASHBOARD, AND A CLOUD-HOSTED WEB APPLICATION. COMPLETING THREE SUCH DOCUMENTED PROJECTS WILL ENHANCE MY RESUME AND DEMONSTRATE MY HANDS-ON ABILITIES TO POTENTIAL EMPLOYERS.

THE THIRD STAGE OF MY ROADMAP EMPHASIZES PRACTICAL EXPOSURE. DURING THE SECOND YEAR OF THIS PLAN, I AIM TO PARTICIPATE IN AT LEAST ONE MAJOR HACKATHON SUCH AS THE SMART INDIA HACKATHON OR GOOGLE SOLUTION CHALLENGE. HACKATHONS PROVIDE OPPORTUNITIES TO WORK IN TEAMS, THINK CREATIVELY, AND SOLVE REAL-WORLD PROBLEMS UNDER TIME CONSTRAINTS. THEY ALSO HELP IN NETWORKING WITH INDUSTRY MENTORS AND ACADEMIC EXPERTS. ALONG

WITH HACKATHONS, I INTEND TO CONTRIBUTE TO OPEN-SOURCE PROJECTS THROUGH PLATFORMS LIKE GITHUB. THIS WILL HELP ME BUILD A STRONGER PRESENCE IN THE DEVELOPER COMMUNITY AND SHOWCASE MY COLLABORATIVE SKILLS.

IN PARALLEL, I WILL BEGIN APPLYING FOR INTERNSHIPS THAT MATCH MY CERTIFICATIONS AND PROJECT EXPERIENCE. I PLAN TO CREATE A STRONG LINKEDIN PROFILE, ADD MY SKILLS, PROJECT LINKS, AND TAKE PART IN PROFESSIONAL NETWORKING. CONNECTING WITH RECRUITERS, SENIORS, AND MENTORS WILL INCREASE MY VISIBILITY AND HELP ME IDENTIFY INTERNSHIP OPPORTUNITIES FASTER. I WILL ALSO PREPARE FOR INTERVIEWS BY PRACTICING CODING PROBLEMS ON PLATFORMS LIKE LEETCODE OR CODECHEF AND IMPROVING MY COMMUNICATION SKILLS.

THE FINAL STAGE OF MY ROADMAP FOCUSES ON TRANSITIONING INTO THE PROFESSIONAL WORLD. BY THE END OF THE THIRD YEAR OF THIS PLAN, I AIM TO SECURE AN INTERNSHIP OR ENTRY-LEVEL ROLE IN FIELDS LIKE CLOUD COMPUTING, DATA ANALYTICS, OR SOFTWARE DEVELOPMENT. I WILL CONTINUE UPGRADING MY SKILLS WITH ADVANCED CERTIFICATIONS AND EXPLORE SPECIALIZATION AREAS LIKE MACHINE LEARNING, FULL-STACK DEVELOPMENT, OR CYBERSECURITY BASED ON MY INTERESTS.

MY LONG-TERM GOAL IS TO BUILD A SUCCESSFUL TECHNICAL CAREER WHERE I CAN CONTRIBUTE TO IMPACTFUL PROJECTS, CONTINUE LEARNING, AND GROW PROFESSIONALLY.

THIS ROADMAP PROVIDES A CLEAR AND STRUCTURED DIRECTION FOR MY ACADEMIC AND PROFESSIONAL DEVELOPMENT. BY FOLLOWING THESE MILESTONES, DEVELOPING STRONG SKILLS, AND STAYING

CONSISTENT, I AIM TO BUILD A SUCCESSFUL AND FUTURE-READY CAREER.

GITHUB LINK:

<https://github.com/abhinavsarda11-create>

REFLECTION

Completing this assignment was both challenging and rewarding.

One of the main challenges I faced was organizing all the required sections—SMART goals, certification research, LinkedIn updates, hackathon planning, and the career roadmap—in a clear and systematic manner. Gathering accurate information about certifications, aligning them with my goals, and ensuring the roadmap was realistic required careful thought. Another challenge was reflecting honestly on my strengths and weaknesses to set goals that were both ambitious and achievable.

Through this assignment, I improved several important skills. My research skills became stronger as I explored various certification providers, compared course content, and assessed which ones would be most beneficial for my career. I also enhanced my planning and time-management skills by structuring my short-, medium-, and long-term goals. Additionally, writing the roadmap helped me improve my self-assessment, career planning, and professional communication skills.

Overall, this assignment helped me create a clearer picture of my future academic and professional path. I now understand how

to set measurable goals, choose relevant certifications, and participate in professional activities like hackathons and LinkedIn networking. I will continue applying these strategies to stay focused, track my progress, and build a strong profile for future opportunities.

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COURSE: B-TECH-CSE-AI&ML