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

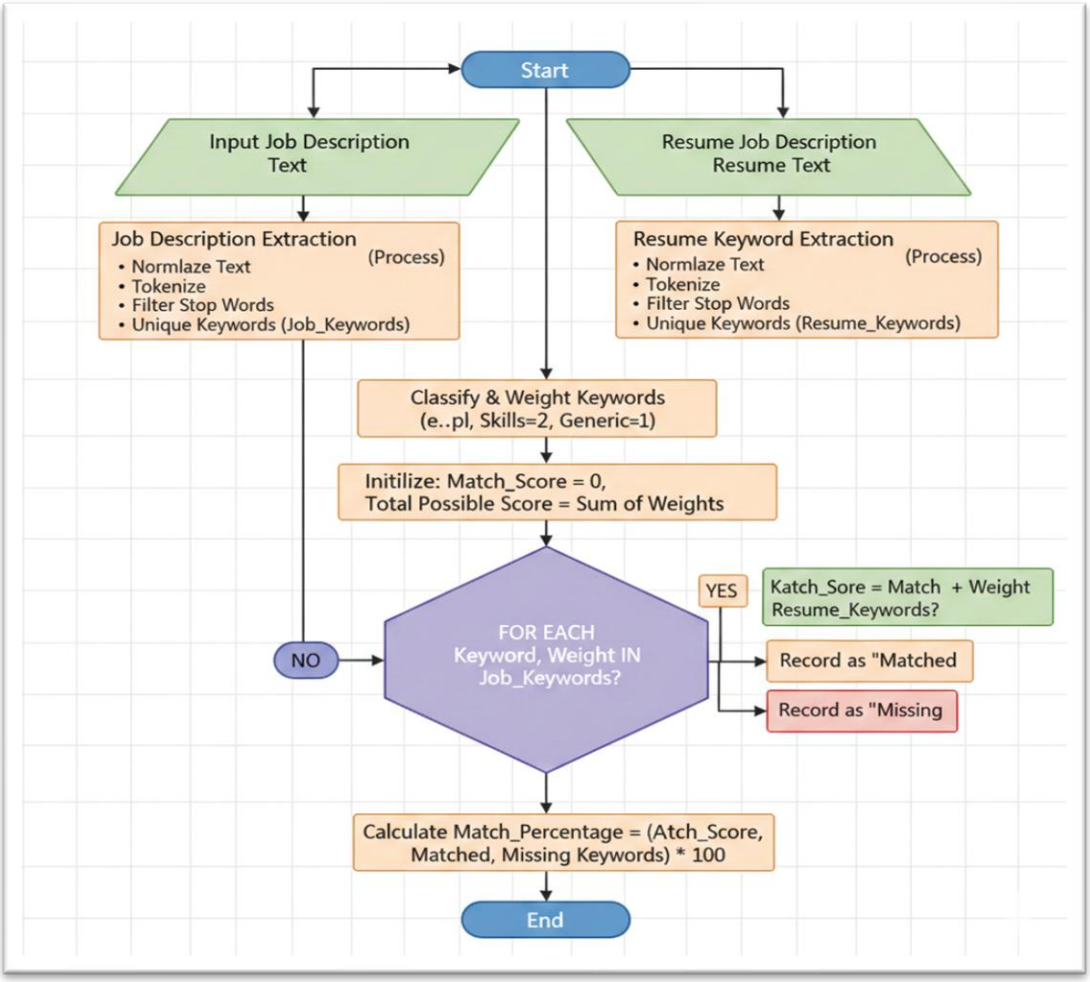
```
DEFINE STOP_WORDS_LIST = ["a", "an", "the", "and",
"or", "for", "with", ...]
DEFINE WEIGHTS = {
   "JOB_TITLE_KEYWORDS": 3,
   "SKILL_KEYWORDS": 2,
   "GENERIC_KEYWORDS": 1
}
```

```
FUNCTION ResumeKeywordAnalyzer(Resume_Text,
Job_Description_Text)
   Job_Keywords =
EXTRACT_KEYWORDS(Job_Description_Text,
STOP_WORDS_LIST)
   Resume_Keywords =
EXTRACT_KEYWORDS(Resume_Text, STOP_WORDS_LIST)

   Job_Keywords_Weighted =
CLASSIFY_AND_WEIGHT(Job_Keywords, WEIGHTS)

   Match_Score = 0
   Total_Possible_Score = 0
   Matched_Keywords = []
   Missing_Keywords = []

   FOR EACH Keyword, Weight IN
Job_Keywords_Weighted
      Total_Possible_Score = Total_Possible_Score +
Weight

      IF Keyword IS PRESENT IN Resume_Keywords THEN
         Match_Score = Match_Score + Weight
         APPEND Keyword TO Matched_Keywords
      ELSE
         APPEND Keyword TO Missing_Keywords
      END IF
   END FOR
```

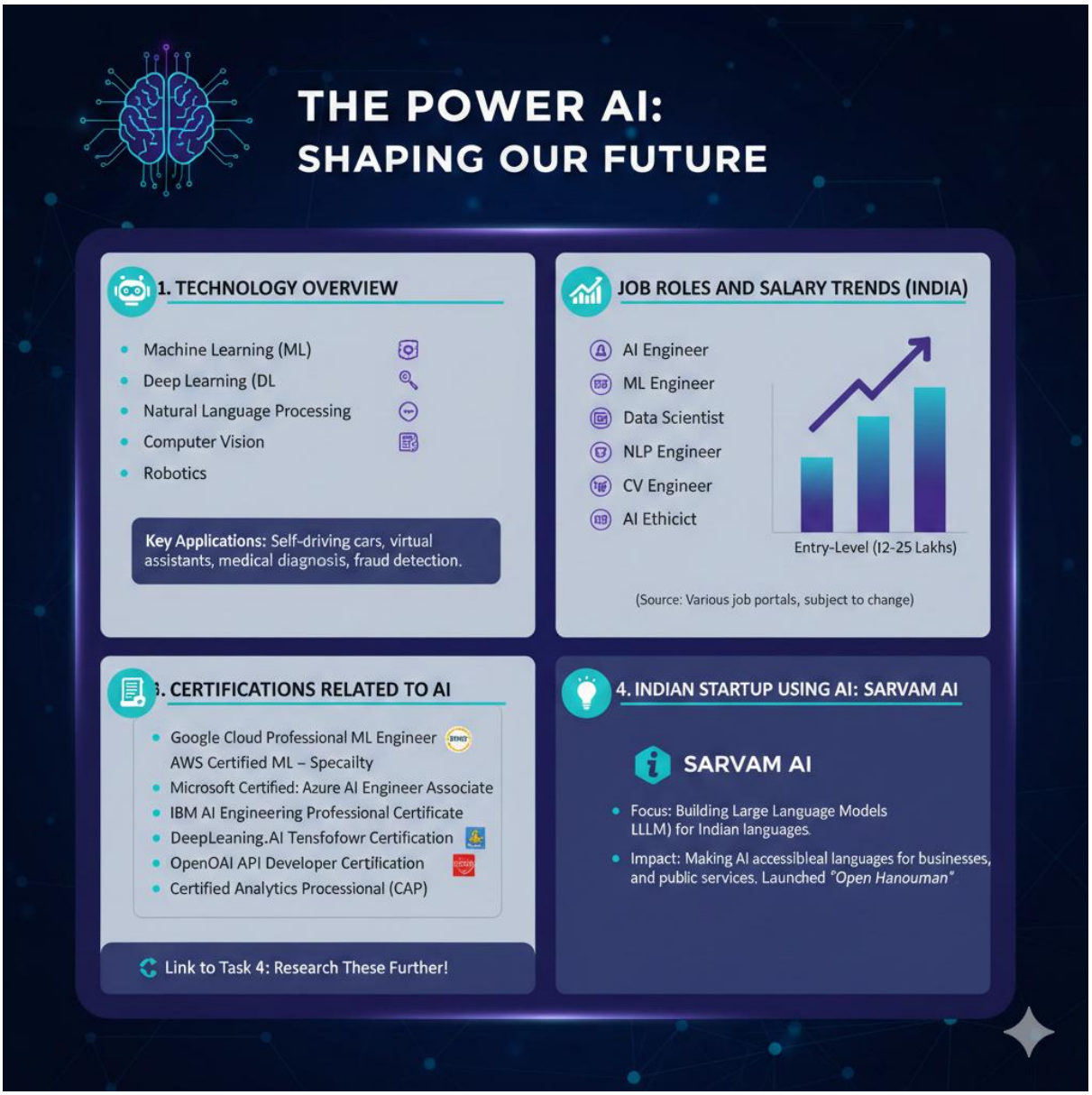
```
    IF Total_Possible_Score > 0 THEN
        Match_Percentage = (Match_Score /
Total_Possible_Score) * 100
    ELSE
        Match_Percentage = 0
    END IF

    GENERATE_REPORT(Match_Percentage,
Matched_Keywords, Missing_Keywords)
END FUNCTION

FUNCTION EXTRACT_KEYWORDS(Text, Stop_Words)
    Normalized_Text = LOWERCASE(Text)

    Word_List = SPLIT_INTO_WORDS(Normalized_Text)

    Filtered_Words = REMOVE_ITEMS(Word_List,
Stop_Words)


   Stemmed_Words = APPLY_STEMMING(Filtered_Words)


    Unique_Keywords =
GET_UNIQUE_SET(Filtered_Words)

    RETURN Unique_Keywords
```

END FUNCTION

FLOWCHART:→



INFOGRAPHIC :



LINUX & AUTOMATION PRACTICE: SCREENSHOTS→

```
HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5
$ pwd
/d/lab 5

HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5
$ ls

HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5
$ mkdir career_folder

HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5
$ cd career_folder

HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5/career_folder
$ touch file.txt

HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5/career_folder
$ touch abc.txt

HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5/career_folder
$ rm abc.txt

HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5/career_folder
$ cat file.txt

HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5/career_folder
$ cat file.txt
My name is Pritam singh
i am currently working on assignment-5 of csf.
HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5/career_folder
$ cp file.txt r33.txt

HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5/career_folder
$ cat r33.txt
My name is Pritam singh
i am currently working on assignment-5 of csf.
HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5/career_folder
$ mv r33.txt r35.txt

HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5/career_folder
$ cat r35.txt
My name is Pritam singh
i am currently working on assignment-5 of csf.
HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5/career_folder
$ bash

HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5/career_folder
$ chmod 755 file.txt

HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5/career_folder
$
```

```
HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5/career_folder
$ touch career.sh

HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5/career_folder
$ cd career.sh
bash: cd: career.sh: Not a directory

HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5/career_folder
$ bash career.sh

HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5/career_folder
$ cat career.sh

HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5/career_folder
$ cat career.sh

HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5/career_folder
$ cat career.sh

HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5/career_folder
$ cat career.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:"
uptimes
HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5/career_folder
$ chmod
chmod: missing operand
Try 'chmod --help' for more information.

HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5/career_folder
$ chmod +x career.sh

HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5/career_folder
$ bash career.sh
Creating Career Development Folder Structure...
Folders Created Successfully!
System Uptime:
career.sh: line 14: uptimes: command not found

HP@LAPTOP-55D8ORNS MINGW64 /d/lab 5/career_folder
$
```

CAREER PLANNING & PROFESSIONAL READINESS

1. SMART GOALS:

Short-Term SMART Goal (0–6 months)
I will learn the basics of Python, Linux, and AI concepts and complete at least two beginner-level projects (such as a chat-bot or data classifier) by consistently studying 1 hour daily for the next 6 months.

Medium-Term SMART Goal (6–18 months)
I will complete two industry-recognized certifications such as "Coursera Machine Learning" and "AWS AI Practitioner" within 18 months and publish 3 projects on GitHub to build a strong technical portfolio.

Long-Term SMART Goal (2–4 years)
I will secure a paid internship or entry-level role as a Machine Learning/AI Engineer by building advanced skills, completing specialized certifications, and gaining hands-on experience through hackathons and open-source contributions.

2. CERTIFICATION RESEARCH:

Certification 1: Machine Learning (Coursera – Andrew Ng)

Provider: Stanford University / Coursera
Duration: 8–12 weeks
Cost: Free (audit mode) / ₹3,500 for certificate
Skills Covered:

- Supervised learning
- Regression & classification
- Neural networks
- Model evaluation
- **Alignment with SMART Goal:**
  This certification builds strong foundational knowledge in machine learning, supporting the short-term and medium-term goals of learning core AI concepts and completing technical projects.

Certification 2: AWS Certified AI Practitioner

Provider: Amazon Web Services
Duration: 1–2 months
Cost: Around ₹7,000–₹10,000
Skills Covered:

- AWS cloud AI tools
- Machine learning workflow
- AI deployment & automation
- **Alignment with SMART Goal:**
  This certification aligns with the medium and long-term goals by providing cloud-ready AI skills, increasing employability, and preparing the student for AI/ML internships.

3. HACKATHON / CONTEST / OPEN-SOURCE PLAN

Hackathon Plan

Event Name: Smart India Hackathon (SIH)
Date: varies (next upcoming cycle)
Preparation Steps:

- Learn basics of AI, Python, and project development
- Form a team or join an existing team
- Practice problem-solving on platforms like HackerRank, Kaggle
- Prepare a mini-project as a portfolio
- Attend pre-hackathon workshops

4. CAREER ROADMAP

My long-term goal is to become a skilled Artificial Intelligence and Robotics Engineer capable of building intelligent systems that solve real-world problems. To reach this goal, I plan to follow a structured, year-wise development roadmap that includes skill-building, certifications, hands-on projects, and professional experience.

Year 1: Foundation Building

In the first year of my B-Tech program, my focus will be on understanding fundamental concepts such as Python programming, C programming, computational thinking, Linux commands, and problem-solving. I will also work on basic projects like a chat-bot, a calculator, or a simple machine learning model. This will give me confidence in programming and prepare me for more advanced work. In addition, I will build a strong online presence by creating a LinkedIn profile

and GitHub repository, ensuring that my work is publicly visible.

Year 2: Exploring AI & Machine Learning

During the second year, I will start diving deeper into artificial intelligence, machine learning, and data science. I plan to complete at least two major certifications—Machine Learning by Andrew Ng and AWS AI Practitioner. These will help me strengthen my concepts while understanding how AI models work in real-world scenarios. I also aim to participate in hackathons and coding competitions to gain hands-on experience and teamwork skills. I will work on intermediate-level projects such as image classification, speech recognition, and data visualization dashboards.

Year 3: Advanced Learning & Internships

In the third year, I will focus on advanced AI topics such as deep learning, computer vision, NLP (Natural Language Processing), and robotics systems. I plan to take part in specialized certification programs such as Tensor Flow Developer Certificate or IBM AI Engineering. Along with learning, I will work on larger projects like autonomous navigation, object detection, or real-time AI automation. During this year, my goal is to secure one or two internships in AI or robotics companies. This practical

exposure will help me apply my knowledge and understand industry expectations.

Year 4: Specialization & Career Preparation

The final year of my degree will be dedicated to specialization and career preparation. I will work on a final-year AI-based project, preferably using machine learning, robotics, or automation. I also plan to contribute to open-source AI projects to strengthen my resume. Additionally, I will prepare for placement interviews by practicing coding problems, building a portfolio website, updating my LinkedIn profile, and networking with professionals in the industry.

Throughout this journey, I will continuously update my GitHub with projects, maintain my resume, and stay active in the AI community. By following this roadmap, I will be fully prepared to start my career as an AI Engineer or Robotics Developer, equipped with technical skills, certifications, projects, and industry experience.

REFLECTION

Completing this assignment provided me with a meaningful opportunity to reflect on my academic goals, professional aspirations, and the steps required to achieve them. One of the main challenges I faced was organizing my long-term career vision into clear, actionable SMART goals. Breaking broad ambitions into specific, measurable tasks required careful thought and research. Another challenge was gathering accurate information about certifications and understanding how each one aligns with my future career path. Additionally, planning for hackathons and updating my LinkedIn profile pushed me to present myself more professionally and think about how employers might view my skills.

Throughout this assignment, I improved several important skills, including career planning, research, self-assessment, and professional communication. I also strengthened my ability to evaluate industry certifications and understand their relevance in the job market. Creating a roadmap enhanced my long-term planning skills and helped me visualize my academic and career progression.

What I learned in this assignment will be extremely valuable moving forward. I now have clearer direction and confidence in my steps toward becoming a cloud and DevOps professional. I plan to apply these insights by continuously updating my goals, seeking certifications,

building projects, and expanding my professional network as I advance through my academic and career journey.

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