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E: > AI job Recommendation Project > job_market_analysis.ipynb > from google.colab import files

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```
from google.colab import files
uploaded = files.upload()
import pandas as pd
import re
filename = list(uploaded.keys())[0]
df = pd.read_csv(filename)
print("Dataset Loaded Successfully!")
print("Shape:", df.shape)
df = df[['posting_title','location','description','industries','job_function','seniority_level']]
df.dropna(inplace=True)
def clean_text(text):
    text = text.lower()
    text = re.sub(r'[^\w\s]', '', text)
    return text
df['clean_description'] = df['description'].apply(clean_text)
print("\nCleaned Data Preview:")
df.head()
```

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Saving linkedin_jobs_2025_11_13.csv to linkedin_jobs_2025_11_13.csv
Dataset Loaded Successfully!
Shape: (1035, 15)

Cleaned Data Preview:

	posting_title	location	description	industries	job_function	seniority_level	clean_description
0	Data Engineer	European Union	Freelance Data Engineer (Remote – Europe)	IT Services and IT Consulting	Information Technology	Mid-Senior level	freelance data engineer remote europe \ncont..
1	Junior Data Engineer	Athens, Attiki, Greece	We are looking for two Junior to Mid-level Dat...	IT Services and IT Consulting	Other	Mid-Senior level	we are looking for two junior to midlevel data..

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Search

E: > AI job Recommendation Project > job_market_analysis.ipynb > top_skills = skill_df.head(15)

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```
top_skills = skill_df.head(15)
plt.figure(figsize=(10,6))
plt.barh(top_skills['skill'], top_skills['Demand_Count'])
plt.xlabel("Job Demand")
plt.ylabel("Skill")
plt.title("Top 15 Trending Job Market Skills")
plt.gca().invert_yaxis()
plt.show()
```

Python

... Top 15 Trending Job Market Skills

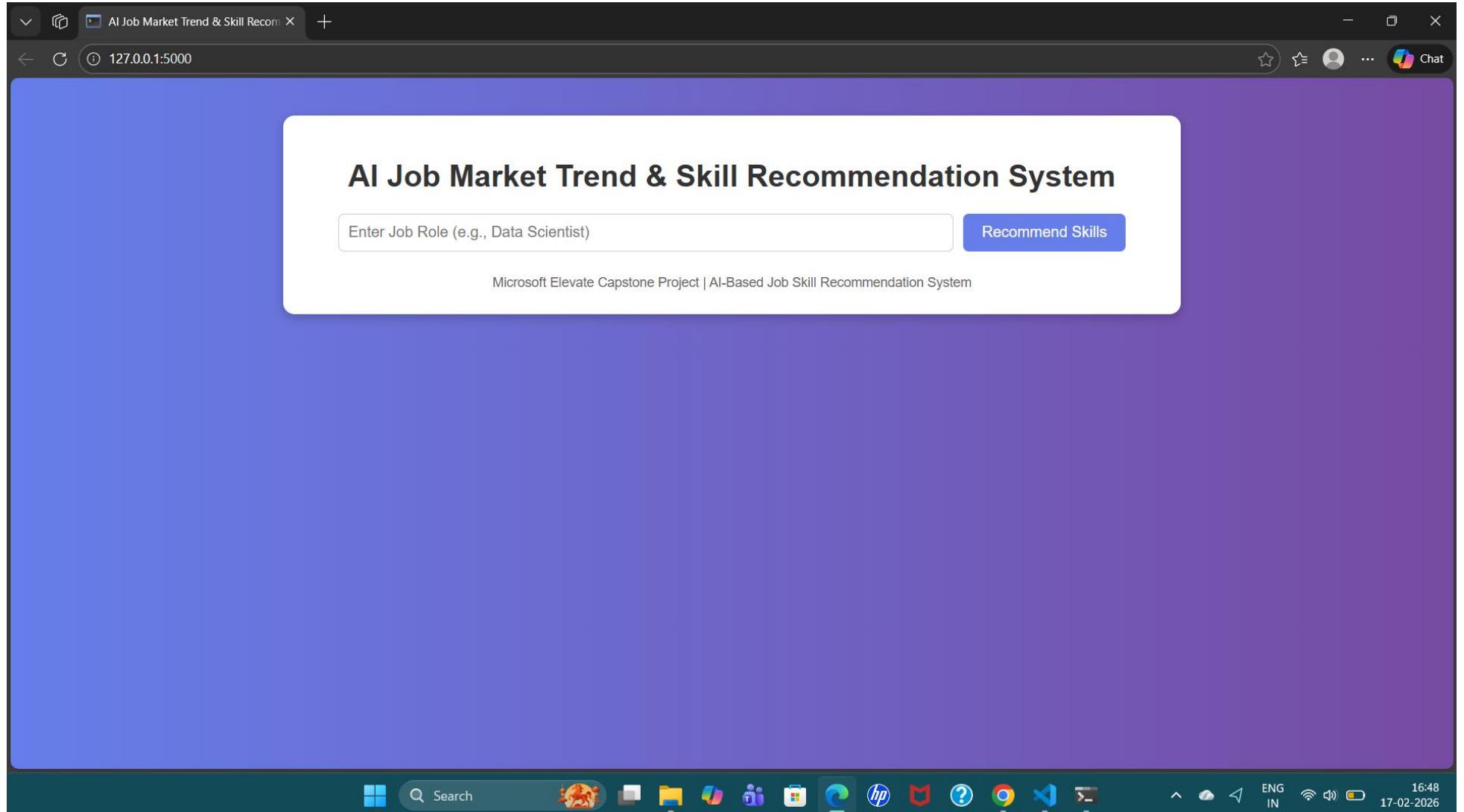
A horizontal bar chart titled "Top 15 Trending Job Market Skills". The y-axis is labeled "skill" and lists 15 skills from highest demand to lowest. The x-axis represents the "Demand Count". The bars are blue and show a clear downward trend in demand count from top to bottom.

Skill	Demand Count
python	Very High
sql	High
excel	Medium-High
cloud	Medium
machine learning	Medium-Low
git	Low-Medium
data science	Medium-Low
aws	Medium-Low
azure	Medium-Low
power bi	Medium-Low
tableau	Medium-Low
pytorch	Medium-Low
spark	Medium-Low
tensorflow	Medium-Low
... (15th skill)	Lowest

Cell 6 of 8 ⌛ Go Live ⌚

The screenshot shows a code editor window with a dark theme. The main area displays a Python script named `ai_logic.py`. The code implements various functions for processing job descriptions and extracting skills. A sidebar on the left contains icons for file operations like Open, Save, Find, and others. The status bar at the bottom right shows the current line (Ln 27), column (Col 58), and encoding (UTF-8). It also includes a Python icon and a "Go Live" button.

```
1 import pandas as pd
2 import re
3 from collections import Counter
4 def load_data():
5     df = pd.read_csv('data/linkedin_jobs.csv')
6     df = df[['posting_title','description']].dropna()
7     return df
8 def clean_text(text):
9     text = text.lower()
10    text = re.sub(r'[^a-zA-Z\s]', '', text)
11    return text
12 skills_list = [
13     'python','java','c++','sql','machine learning','deep learning','data science',
14     'artificial intelligence','tensorflow','pytorch','nlp','power bi','tableau',
15     'excel','aws','azure','cloud','devops','docker','kubernetes','react','node',
16     'html','css','javascript','flask','django','git','linux','spark','hadoop'
17 ]
18 def extract_skills(text):
19     extracted = []
20     for skill in skills_list:
21         if skill in text:
22             extracted.append(skill)
23     return extracted
24 def get_trending_skills():
25     df = load_data()
26     df['clean_desc'] = df['description'].apply(clean_text)
27     df['skills'] = df['clean_desc'].apply(extract_skills)
28
29     all_skills = [skill for sublist in df['skills'] for skill in sublist]
30     skill_counts = Counter(all_skills)
31
32     return skill_counts.most_common(15)
33 def recommend_by_role(role):
34     role = role.lower()
35     df = load_data()
36
37     matched_jobs = df[df['posting_title'].str.lower().str.contains(role)]
```



AI Job Market Trend & Skill Recom × +

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Chat

AI Job Market Trend & Skill Recommendation System

Enter Job Role (e.g., Data Scientist)

Recommend Skills

Recommended Skills for "data scientist"

- python
- sql
- data science
- machine learning
- git
- excel
- cloud
- aws
- azure
- pytorch

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AI Job Market Trend & Skill Recom × +

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Trending Skills in Job Market

- python (735 jobs)
- sql (617 jobs)
- excel (483 jobs)
- cloud (420 jobs)
- machine learning (393 jobs)
- git (349 jobs)
- data science (340 jobs)
- aws (337 jobs)
- azure (252 jobs)
- power bi (220 jobs)
- tableau (184 jobs)
- pytorch (179 jobs)
- spark (163 jobs)
- tensorflow (136 jobs)
- java (128 jobs)



16:50 ENG IN 17-02-2026