

AI Assignment 3

Career Advisory System using durable-rules module

by Shivam Gupta, 2020406

Code Explanation:

The program first asserts the type of career the user is interested in, and then asserts the interests and the courses and the cgpa in each course from and then moves to the next ruleset as suggested. The program is divided into different rulesets based on the duration of work, or the type of career that intrigues the user, etc.

Working and Assumptions:

Input Required:

- **Type:** Enter the type of career you're interested in. For example, research, humanities, information technology, etc. You can also skip this by entering "any".
- **Time:** Planned duration of the work, short (part-time internship) or long (full-time)
- **Interests:** list of available interests is ui_design, graphic_designing, physics, biology, chemistry, literature, public_speaking, management, leadership, finance, entrepreneurship, fashion, philosophy, psychology, dance, performing, tourism, media, art, machine_learning, data_science, programming, operating_systems, teaching, research, maths, quantum_computing" or none. Multiple interests can be chosen. Mention the skill level for interest as 1 (beginner), 2 (intermediate), or 3 (expert). End the input with "end".
- **Courses:** list of available courses is designing_systems, entrepreneurship, economics, human_centered_design, machine_learning, artificial_intelligence, computer_networks, natural_language_processing, database_system_implementation, cryptography, network_security, competitive_programming, deep_learning, data_mining, graphic_designing, sociology, intro_to_philosophy", Multiple courses can be chosen. Mention the cgpa for each course you select. End the input with "end".

Run the program by running `py AI-A3-shivamgupta-2020406.py`

Output:

- Suggested career options.

Ingenuity shown:

- I have taken arrays of courses and interests which means that any number of interests and courses can be chosen (they should not be repeated).
- The time duration of career is also considered as internship generally requires less experience and this will give better results.
- The skill level of interests is considered so different skill levels get different outputs

- Possible internships are also considered to make the suggestions all rounded.
- The cgpa is also considered to better plan the career options.

Screenshots of program working:

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File Edit Selection View Go Run Terminal Help
qq.py - Visual Studio Code

C:\Users\shiv> cd C:\Users\shiv\OneDrive\ Desktop > qq.py ...
367 def output(c):
368     print('Fact: {} (1) (2) {}'.format(c.m.subject, c.m.predicate,
369                                         c.m.object))
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372 # humanities RuleSet for careers in art and such -----
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Welcome to Career Advisory System
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What's your name? sss
Hi, sss! Hope you are having a great time at IIITD.
Enter the type of career that fascinates you: sports, humanities, research, information technology, business finance, any:
research
Enter the duration of work you're looking for: short (part-time internship), long (considering joining full-time):
long
Enter interests and level at the interests. Enter 'end' to stop input
Available options: ui_design, graphic_designing, physics, biology, chemistry, literature, public_speaking, finance, data_science, dance, performing, tourism, media, leadership, art, machine_learning, programming,
operating_systems, teaching, research, maths, quantum_computing, fashion, philosophy, psychology, entrepreneurship
Enter interest: chemistry
Enter level (1, 2, 3): 3
Enter interest: teaching
Enter level (1, 2, 3): 2
Enter interest: end
Select the courses you have done and then enter the cgpa scored by you in that particular course. Enter 'end' to stop input
Available options: designing_systems, entrepreneurship, economics, human_centered_design, machine_learning, artificial_intelligence, computer_networks, natural_language_processing, database_system_implementation,
cryptography, network_security, competitive_programming, deep_learning, data_mining, graphic_designing, sociology, intro_to_philosophy
Enter course name: end
Suggestions:
Fact: Consider doing higher studies and then working as a chemistry professor
Fact: Consider a career as a chemist
C:\Users\shiv>

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qq.py - Visual Studio Code

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long
Enter interests and level at the interests. Enter 'end' to stop input
Available options: ui_design, graphic_designing, physics, biology, chemistry, literature, public_speaking, finance, data_science, dance, performing, tourism, media, leadership, art, machine_learning, programming,
operating_systems, teaching, research, maths, quantum_computing, fashion, philosophy, psychology, entrepreneurship
Enter interest: machine_learning
Enter level (1, 2, 3): 3
Enter interest: programming
Enter level (1, 2, 3): 3
Enter interest: research
Enter level (1, 2, 3): 3
Enter interest: end
Select the courses you have done and then enter the cgpa scored by you in that particular course. Enter 'end' to stop input
Available options: designing_systems, entrepreneurship, economics, human_centered_design, machine_learning, artificial_intelligence, computer_networks, natural_language_processing, database_system_implementation,
cryptography, network_security, competitive_programming, deep_learning, data_mining, graphic_designing, sociology, intro_to_philosophy
Enter course name: machine_learning
Enter cgpa in that course (Enter integer between 1-10): 9
Enter course name: natural_language_processing
Enter cgpa in that course (Enter integer between 1-10): 9
Enter course name: end
Suggestions:
Fact: As you are interested in research you can also consider doing research in ML and related field
Fact: As you are interested in research you can also consider doing research in ML and related field
Fact: Consider a career as a ML engineer
C:\Users\shiv>

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File Edit Selection View Go Run Terminal Help qq.py - Visual Studio Code

qq.py x
C:\Users\shivax> OneDrive\ Desktop > qq.py > ...
681 num = int(input("Enter level (1, 2, 3): "))
682 interest = (inter: num)
683 list_interest.append(interest)
684 print()
685
686 print()
687
688 list_courses = [['end': 1]]
689 print()

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL JUPYTER

Enter the duration of work you're looking for: short (part-time internship), long (considering joining full-time):
long

Enter interests and level at the interests. Enter 'end' to stop input

Available options: ui_design, graphic_designing, physics, biology, chemistry, literature, public_speaking, finance, data_science, dance, performing, tourism, media, leadership, art, machine_learning, programming,
operating_systems, teaching, research, maths, quantum_computing, fashion, philosophy, psychology, entrepreneurship
Enter interest: cryptography
Enter level (1, 2, 3): 3

Enter interest: quantum_computing
Enter level (1, 2, 3): 2

Enter interest: end

Select the courses you have done and then enter the cgpa scored by you in that particular course. Enter 'end' to stop input

Available options: designing_systems, entrepreneurship, economics, human_centered_design, machine_learning, artificial_intelligence, computer_networks, natural_language_processing, database_system_implementation,
cryptography, network_security, competitive_programming, deep_learning, data_mining, graphic_designing, sociology, intro_to_philosophy
Enter course name: cryptography
Enter cgpa in that course (Enter integer between 1-10): 9

Enter course name: data_mining
Enter cgpa in that course (Enter integer between 1-10): 9

Enter course name: database_system_implementation
Enter cgpa in that course (Enter integer between 1-10): 7

Enter course name: end

Suggestions:
Fact: Consider a career as a cryptographer

C:\Users\shivax\
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File Edit Selection View Go Run Terminal Help qq.py - Visual Studio Code

qq.py x
C:\Users\shivax> OneDrive\ Desktop > qq.py > ...
187
188
189 @when_all(m.interests.anyItem((item.management >= 1)))
190 def program(c):
191     c.assert_fact({
192         'subject': 'Consider',
193         'predicate': 'Internship',
194         'object': 'PR'
195     })
196     c.assert_fact(f

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL JUPYTER

Welcome to Career Advisory System

What's your name? shivan

Hi, shivan! Hope you are having a great time at IIITD.
Enter the type of career that fascinates you: sports, humanities, research, information_technology, business_finance,
business_finance

Enter the duration of work you're looking for: short (part-time internship), long (considering joining full-time):
short

Enter interests and level at the interests. Enter 'end' to stop input

Available options: ui_design, graphic_designing, physics, biology, chemistry, literature, public_speaking, finance, data_science, dance, performing, tourism, media, leadership, art, machine_learning, programming,
operating_systems, teaching, research, maths, quantum_computing, fashion, philosophy, psychology, entrepreneurship
Enter interest: management
Enter level (1, 2, 3): 2

Enter interest: end

Select the courses you have done and then enter the cgpa scored by you in that particular course. Enter 'end' to stop input

Available options: designing_systems, entrepreneurship, economics, human_centered_design, machine_learning, artificial_intelligence, computer_networks, natural_language_processing, database_system_implementation,
cryptography, network_security, competitive_programming, deep_learning, data_mining, graphic_designing, sociology, intro_to_philosophy
Enter course name: end

Suggestions:
Fact: Consider Internship management
Fact: Consider Internship PR

C:\Users\shivax\
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