INTELLIGENT AGENT BASED JOB SEARCH SYSTEM

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ABSTRACT: Job seekers sometimes face a daunting process when it comes to finding employment opportunities that align with their interests and skill set. The challenges stem from a lack of adequate understanding of the organization's goals, its work environment, and existing employment vacancies. Summer employment is increasingly transitioning into year-round supplementary labor. I am now dedicating myself to finding the most effective applications that may be used to do activities, occupations, and chores during one's free time. We choose the duration and the specific allocation of time you want to dedicate to this supplementary task. A mobile application designed to locate and secure short-term paid employment opportunities within close proximity to the user's current location. This platform caters to those seeking immediate financial assistance and are prepared to do little chores such as computer repairs, childcare, lawn mowing, and similar activities.

Keywords: Job, Agent, rural, data base.

INTRODUCTION

In the current worldwide economy, the difficulty of getting a job is intensified by the complexities involved in the job search process. Typically, while seeking employment, individuals often use several methods such as perusing newspapers, listening to radio and television advertisements that promote job openings, and enrolling on many job search platforms as Academickeys.com, Monster.com, Careerbuilder.com, and others. Several employers choose not to directly register with these platforms to give comprehensive information about their employment requirements. Instead, they choose to disclose crucial facts only on their company's website. As a result, we may not always have access to all job openings, information about the employer's characteristics and reputation, which are crucial in determining whether the position aligns with our preferences. Occasionally, we may be impressed by a firm's reputation but lack information on the rating of the company in terms of pay and other factors, as provided by current or former employees. Considering all of these factors, we suggest creating an intelligent agent (as opposed to a human agent) to carry out the same search tasks via interaction with the employer and job search coordinator agents. We suggest using an agent-based utility concept to provide appropriateness profile based on customizable parameters such as proximity to workplace, schedule and shift demands, job conditions, safety and risk factors, compensation, skillset, etc. The proposed system will use the ANDROID, JADE, and LEAP technologies to provide accessibility across both mobile and online platforms. These agents would operate using fuzzy preference criteria to accurately determine a list of tasks that align with the user's preferred specifications. The paper is structured into parts in the following manner. Section 2 presents comprehensive information on Agent Based Systems, Ontology Agent Based Utility, and Job search theory. The main objective is to construct an Agent based Job Search system. Section 3 provides comprehensive information on the Intelligent Job Search System, including its implementation with fuzzy preferences. Section 4 provides the specific steps and procedures for carrying out the JADE-LEAP implementation, as described in references [4-5]. Android 2.2, equipped with Google Maps

LITERATURE SURVEY

"Mobile Agents Process Migration And Its Implications "

Mobile agents are agents that can physically travel across a network, and perform tasks on machines that provide agent hosting capability. This allows processes to migrate from computer to computer, for processes to split into multiple instances that execute on different machines, and to return to their point of origin. Unlike remote procedure calls, where a process invokes procedures of a remote host, process migration allows executable code to travel and interact with databases, file systems, information services and other agents. The technology behind mobile agents is examined, and an analysis of its uses and implications is offered

"Is it Agent or just Programmer? Taxonomy for Autonomous Agents "

The advent of software agents gave rise to much discussion of just what such an agent is, and of how they differ from programs in general. Here we propose a formal definition of an autonomous agent which clearly distinguishes a software agent from just any program. We also offer the beginnings of a natural kinds taxonomy of autonomous agents, and discuss possibilities for further classification. Finally, we discuss subagents and multiagent systems

"Intelligent Agents : Theory and Practice"

The concept of an agent has become important in both artificial intelligence (AT) and mainstream computer science. Our aim in this paper is to point the reader at what we perceive to be the most important theoretical and practical issues associated with the design and construction of intelligent agents. For convenience, we divide these issues into three areas (though as the reader will see, the divisions are at times somewhat arbitrary). Agent theory is concerned with the question of what an agent is, and the use of mathematical formalisms for representing and reasoning about the properties of agents. Agent architectures can be thought of as software engineering models of agents; researchers in this area are primarily concerned with the problem of designing software or hardware systems that will satisfy the properties specified by agent theorists. Finally, agent languages are software systems for programming.

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them. The article includes a short review of current and potential applications of agent technology.

"Studies In Agents Based IP Traffic Congestion Management is DiffServ Networks"

Computer networks used in Telecommunication, particularly the Internet, have been used to carry computer data only, but now they carry voice and/or video also. Because each type of thistraffic has specific flow characteristics, each type has to be handled with a certain level of guaranteed quality. So based on that, IETF introduced a Quality-of Service tool, called Differentiated Service. It offers different levels of service to different classes of traffic. Even then, the problem of congestion arises due to sharing of a finite bandwidth. In the case of real time multimedia traffic, congestion due to inadequate bandwidth contributes heavily to the quality, whereas in non-real time traffic the effect of congestion is to make data transfer take a longer time. In contrast, real time data become become obsolete if they do not arrive on time. Therefore, what is needed is some way of ensuring that during periods of congestion, real time traffic is not affected at all, or is at least given a higher priority than non-real

time.The motivationfor the research that has been carried out was therefore to develop a rule-based traffic management scheme for Differ networks with a view to introducing QoS (Quality of Service). Thisrequired definition of rules for congestion management/control based on the type and nature of IP traffic encountered, and then constructing and storing these rules to enable future access for application and enforcement. We first developed the required rule base and then developed the software based mobile agents using the Java (RMI) application package, for accessing these rules for application and enforcement. Consequently these mobile agents act as smart traffic managers at nodes/routers in the computer-based communication network and manage congestion. The rule base as well as the mobile agent software developed in Java (RMI), were validated using computer simulation. The contents of the research carried out have been presented in the thesis.

"Intelligent Agents Based Hotel Search and Booking System"

commerce (mobile commerce) is the buying and selling of goods and services through wireless handheld devices such as cellular telephone and personal digital assistants PDA. M- commerce provides lot of services like Mobile ticketing, Mobile banking, Mobile location based services, Mobile auctions, Mobile purchasing and so on. This represents an incredible opportunityto enable mobile devices, as a universal device for mobile commerce applications. For such applications, we normally want to choose the best hotel in prime locations, with modern facilities, clean environment and affordable rates. This can be time consuming and sometimes costly whendoing this on our own or using human agents. So based on this we here propose "Intelligent Agent Based Hotel Search and Booking System". This system here would use an intelligent agent (instead of the human agent) to perform similar search and booking activities that can improve the speed of the search and reduce cost significantly. So in summary we propose developing a anagent that will move from hotel to hotel from the mobile devices like Smart phones by collectingdetails on the list of available facilities, price, customer experience, transportation etc and forward-feeding them back to the user's mobile phone. The implementation will be carried using JADE-LEAP agent development kit.

"A Perspective on Recent Developments In Utility Theory"

The Allais Paradox seems as fresh today as it was when first posed some 40 years ago. It has been discussed in the intervening decades and led to many suggestions for modifying, extending, or abandoning standard

subjective expected utility theory. It has also led to much discussion of the distinction between normative and descriptive models and their role in prescriptive decision support. It seems appropriate in a conference entitled DecisionMaking: towardsthe21stCentury to reflect on these developments, particularly in relation to recent extensions to utility theory and other mathematical models of preferences, and consider, in particular, their possible implication for prescriptive decision analysis.

"Risk Aversion And Expected-Utility Theory : A Calibration Theorem"

Within the expected-utility framework, the only explanation for risk aversion is that the utility function for wealth is concave: A person has lower marginal utility for additional wealth when she is wealthy than when she is poor. This paper provides a theorem showing that expected-utility theory is an utterly implausible explanation for appreciable risk aversion over modest stakes: Within expected-utility theory, for any concave utility function, even very little.

SYSTEM ARCHITECTURE

The system architecture for "Intelligent Agent Based Job Search System" is as follows:

Employer : Employer can signup and login to application and then post jobs or activate or deactivate.

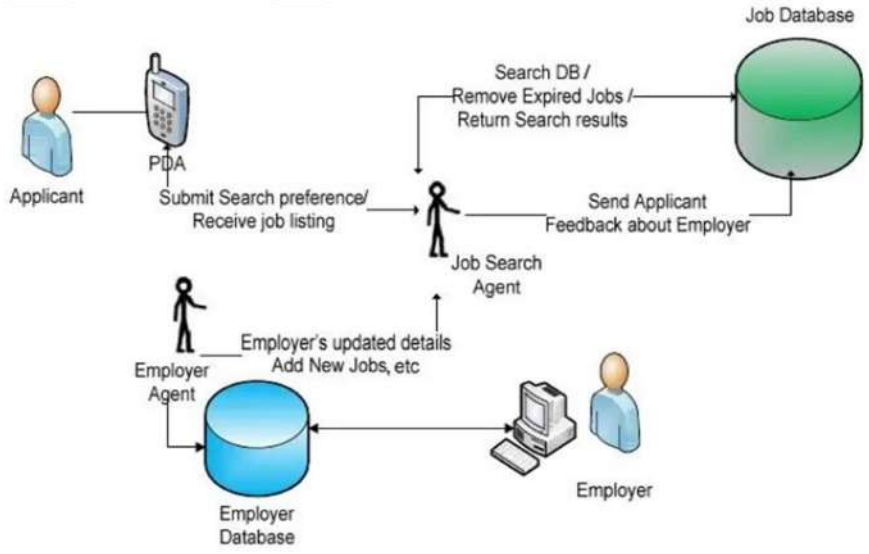
Applicant: Applicant can signup and login to application and then search job based on preferred distance, shift and working days and this search technique will use fuzzy search mechanism.

Figure-5.1 DIAGRAM OF SY

IMPLEMENTATION

6.1 TECHNOLOGIES USED

Python



Python is a general-purpose language. It has wide range of applications from Web development (like: Django and Bottle), scientific and mathematical computing (Orange, SymPy, NumPy) to desktop graphical user Interfaces (Pygame, Panda3D). The syntax of the language is clean and length of the code is relatively short. It's fun to work in Python because it allows you to think about the problem rather than focusing on the syntax.

Django

Django is a high-level Python web framework that enables rapid development of secure and maintainable websites. Built by experienced developers, Django takes care of much of the hassle of web development, so you can focus on writing your app without needing to reinvent the wheel. It is free and open source, has a thriving and active community, great documentation, and many options for free and paid-for support.

Implementation and Testing:

Implementation is one of the most important tasks in project is the phase in which one has to be cautions because all the efforts undertaken during the project will be very interactive. Implementation is the most crucial stage in achieving successful system and giving the users confidence that the new system is workable and effective. Each program is tested individually at the time of development using the sample data and has verified that these programs link together in the way specified in the program specification. The computer system and its environment are tested to the satisfaction of the user.

RESULTS**CHAPTER 8 RESULT ANALYSIS**

In above screen python server started and now open browser and enter URL as 'http://127.0.0.1:8000/index.html' and press enter key to get below home page

SIGNUP SCREEN

In above screen click on 'Signup Here' link to signup as New Employer and Job Search Agent.

In above screen user is entering signup details and press submit button to store details in Database.

LOGIN SCREEN

In above screen user signup completed and details saved in Database and now click on 'Login' link to get below screen

In above screen user is login and after login will get below screen

Jobs Posting Screen

In below screen new job is posting by the "Employer".

In above screen the jobs are posted after login and there is an Activate and Deactivate job option in above screen

CONCLUSION

The process of searching for a job is quite intricate and may include spending many hours engaging with various search platforms, submitting applications, interacting with human representatives, and so on. The advanced system uses fuzzy preference criteria to intelligently anticipate the user's demands and make informed judgments on location, wage adjustments, and allowances, all of which are regarded as advantageous to the user. This is apparent in the outcomes shown via various situations and accompanying images. The system might be expanded to include a secure application procedure that verifies the applicant's experience and education, perhaps by integrating biometric data in addition to the job application information, which have been made available elsewhere. Furthermore, the job search process might improve the assessment of utility by including risk elements of success while deciding between different employment opportunities. This might increase the likelihood of applying for the job that would be highly suited for a candidate on several levels. This initiative meets the main needs of job searchers and employers. There are other methods to expand it. One option is to provide suggestions and send email updates for new job posts, taking into account the job seeker's search history. As job searchers may be interested in creating a robust resume, we may provide guidance and information for this purpose. We may also provide resume templates that may appeal to the majority of candidates. The mobile application is designed to meet the needs of job seekers and may also be expanded to provide features for employers.

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