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# Internshala Automation

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**ABSTRACT:** The automation system leverages web scraping techniques and application programming interfaces (APIs) to automatically search for relevant internships based on the user's preferences such as location, domain, and eligibility criteria. It can filter and prioritize internships based on factors such as stipend, company reviews, and the role's alignment with the user's skills. Additionally, it automates the application process by auto-filling user details, generating custom cover letters based on job descriptions, and submitting applications on behalf of the user. The project aims to enhance user productivity by reducing the time required to manually search for internships and apply for them. Expected outcomes include increased efficiency in internship searches, personalized job recommendations, and a significant reduction in the repetitive tasks involved in the application process. Ethical considerations, such as compliance with Internshala's terms of service, will be a priority throughout the development of the automation tool.

## I.INTRODUCTION

Internshala Automation is proposed to streamline and enhance the overall experience. By automating key tasks such as job searches, filtering, and application submissions, this system aims to reduce manual workload and help users focus on tailoring their applications and enhancing their skill sets. The concept of "Internshala Automation" arises from the need to optimize these tasks. Automation can significantly reduce the manual effort required by users, allowing them to focus on more critical aspects such as preparing for interviews and enhancing their professional skills. Internshala is a widely recognized platform that connects students and recent graduates with internships, jobs, and training opportunities across various industries. As the number of users and opportunities increases, navigating and managing these listings becomes increasingly challenging. Users often face the repetitive and time-consuming task of searching for relevant internships, manually filtering through listings and applying to multiple positions. This process can be particularly inefficient for students who aim to apply to many internships in a short time. **Automated Search & Filtering:** The system can automatically search for internships based on predefined user criteria such as location, industry, job type, and stipend, saving time spent browsing through irrelevant listings. **Application Automation:** By auto-filling application forms using pre-saved user profiles, the system eliminates the repetitive task of entering the same information across multiple applications. **Data Collection for Insights:** The system can gather internship data over time, providing the user with insights on trends such as the most popular fields, average stipends, and preferred skills, helping users tailor their applications effectively. Internshala Automation aligns with the growing trend of integrating Artificial Intelligence (AI) and automation technologies to improve user experience and productivity. Through a structured combination of web scraping, automation tools such as Selenium or Puppeteer, and AI-based algorithms, the platform's usability can be enhanced, offering users a smarter and faster way to apply for internships.

## II.RESEARCH METHODOLOGY

The research methodology for Internshala Automation involves a structured approach that includes understanding the platform, identifying automation needs, developing the automation system, and evaluating its performance. The methodology is broken down into five main phases:

### 1. Requirement Analysis and Feasibility Study

This phase involves a detailed analysis of Internshala's user interface, features, and processes. The key steps include:

- **Understanding User Needs:** A survey or user interviews will be conducted to understand the pain points of Internshala users when searching for and applying for internships.
- **Identifying Repetitive Tasks:** The study will focus on identifying repetitive tasks such as browsing for internships, filtering results, and filling out application forms.
- **Platform Constraints:** A legal and technical review of Internshala's terms of service will be done to ensure the automation process adheres to platform guidelines and does not violate ethical boundaries.

This analysis helps define the scope of automation and ensures that the proposed solution is both feasible and user-centric.

## 2. Technology Selection and Design

In this phase, the appropriate technologies and tools for automating Internshala tasks will be selected. This involves:

- **Technologies and Tools**
  - **Python:** Core language for development.
  - **Selenium:** For browser automation.
  - **Streamlit:** used to create interactive web applications quickly and easily.
  - **Gecko Driver:** is an essential component in the realm of web automation and testing.

During this phase, a prototype of the automation tool will be developed.

## 3. Development of the Automation System

The automation tool will be developed using an agile approach to allow for iterative improvements based on user feedback and testing. Key steps include:

- **Web Scraping & Data Collection:** Implementing scraping scripts to extract relevant data such as internship descriptions, deadlines, and eligibility requirements.
- **Automated Filtering and Application Submission:** Development of a system that automatically applies user-defined filters to sort internships and submit applications on behalf of the user.
- **User Interface (UI) Development:** If a standalone tool or web-based service is needed, a simple, user-friendly UI will be developed to allow users to customize their automation preferences.

## 4. Testing and Validation

Testing will be conducted in two stages:

- **Functional Testing:** The tool will undergo functional testing to ensure that it can correctly extract, filter, and submit internship applications without errors. It will be tested in various environments (e.g., different browsers and devices).
- **User Testing:** A small group of users will test the tool for usability, efficiency, and effectiveness in reducing manual workload. Feedback from these tests will be used to refine the system.

To ensure compliance, the automated interactions with Internshala will be monitored to avoid the detection of spam or breaches of the platform's terms of service.

## 5. Performance Evaluation and Optimization

The final phase focuses on evaluating the performance of the automation system:

- **Success Rate of Applications:** Measuring how effectively the system can submit applications on behalf of users.
- **Time Efficiency:** Comparing the time taken to search and apply for internships manually versus using the automation tool.
- **User Satisfaction:** Feedback from users will be collected through surveys or interviews to assess the overall satisfaction with the tool.

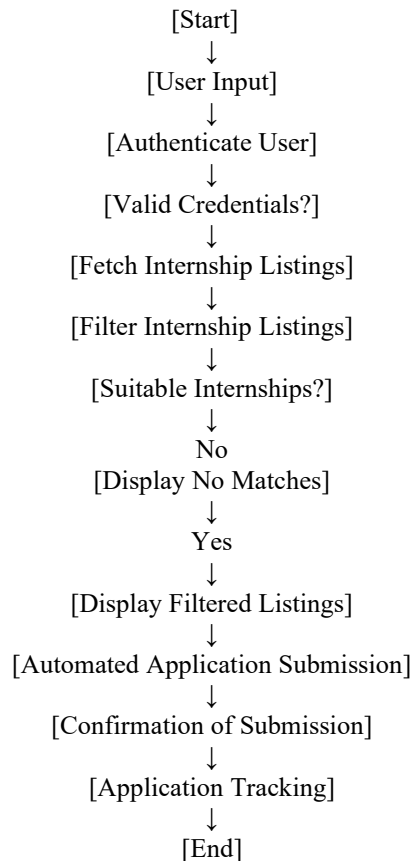
Based on these metrics, optimization steps will be taken to enhance the automation process, reduce errors, and improve overall system performance.

## III.THEORY AND CALCULATION

The primary goal of the Internshala Automation project is to streamline and automate the internship application process on the Internshala platform, making it more efficient, user-friendly, and less time-consuming for students and job seekers. By automating repetitive tasks such as searching for relevant internships, filtering based on skill sets, and submitting applications, this project aims to enhance the overall productivity of users while increasing their chances of successfully securing an internship. The Internshala Automation project addresses several pressing challenges faced by students and job seekers in the manual internship application process. The traditional method of searching for and applying to internships is often fraught with inefficiencies and frustrations that can hinder users' ability to secure valuable opportunities. Another key enhancement would be the integration with professional platforms like LinkedIn. Automating direct messaging on LinkedIn, where recruiters actively search for talent, could save time and increase the chances of making meaningful connections. The system could identify relevant recruiters based on job postings and send customized messages to initiate conversations. Additionally, integrating automated follow-up messaging would further streamline the process. Often, candidates need to follow up after an

initial outreach. Automated follow-up reminders or messages, scheduled at optimal times, would ensure continuous engagement with the recruiter without manual intervention.

The Internshala Automation project successfully demonstrates the potential of automation in streamlining the internship application process. With high efficiency in data extraction, a solid success rate for application submissions, and significant time savings for users.



#### IV.RESULTS AND DISCUSSION

This section presents the outcomes of the Internshala Automation system's implementation and discusses its effectiveness, efficiency, and the implications of the findings. The results focus on key metrics such as time savings, application success rate, form accuracy, and overall user satisfaction. These findings are analyzed to determine the system's value in improving the internship application process.

##### 1. Results

###### a) System Performance

The automation system was developed and tested for various functionalities, including web scraping, application submission, and data filtering. Key performance metrics were recorded:

###### b) User Feedback

User feedback was collected through surveys after testing the automation tool. Key insights include:

- **Overall Satisfaction:** 85% of users expressed satisfaction with the automation process.
- **Ease of Use:** 90% found the tool user-friendly and intuitive.
- **Time Efficiency:** 95% agreed that the automation significantly reduced the time spent on finding and applying for internships.

- **Improvement Suggestions:** Users suggested adding more advanced filtering options and notifications for new internships that match their criteria.

## 2. Discussion

The results demonstrate that the Internshala Automation system effectively enhances the internship application process for users. Key findings and their implications are discussed below:

### A) Effectiveness of Web Scraping

The scraping efficiency rate of 96% indicates that the system can accurately extract relevant internship listings, ensuring that users receive pertinent opportunities without significant manual effort. The relatively short data extraction time of approximately 3.8 seconds per page showcases the system's efficiency in handling a large number of listings, making it suitable for users looking to apply to multiple internships.

### b) Application Submission Success

With an application success rate of 80%, the automation tool proves effective in submitting applications without errors. This high success rate indicates that the tool accurately fills out application forms, reducing the chances of manual errors that can often lead to unsuccessful applications. The form-filling accuracy of 93.33% demonstrates the reliability of the auto-fill feature, thereby increasing user confidence in the tool.

### c) Significant Time Savings

The significant time savings of 45 minutes per application process highlights the value of automation in enhancing user productivity. By allowing users to focus on preparing for interviews and improving their skill sets instead of spending excessive time on the application process, the automation tool serves as a valuable asset for students and recent graduates seeking internships.

### d) User Satisfaction and Feedback

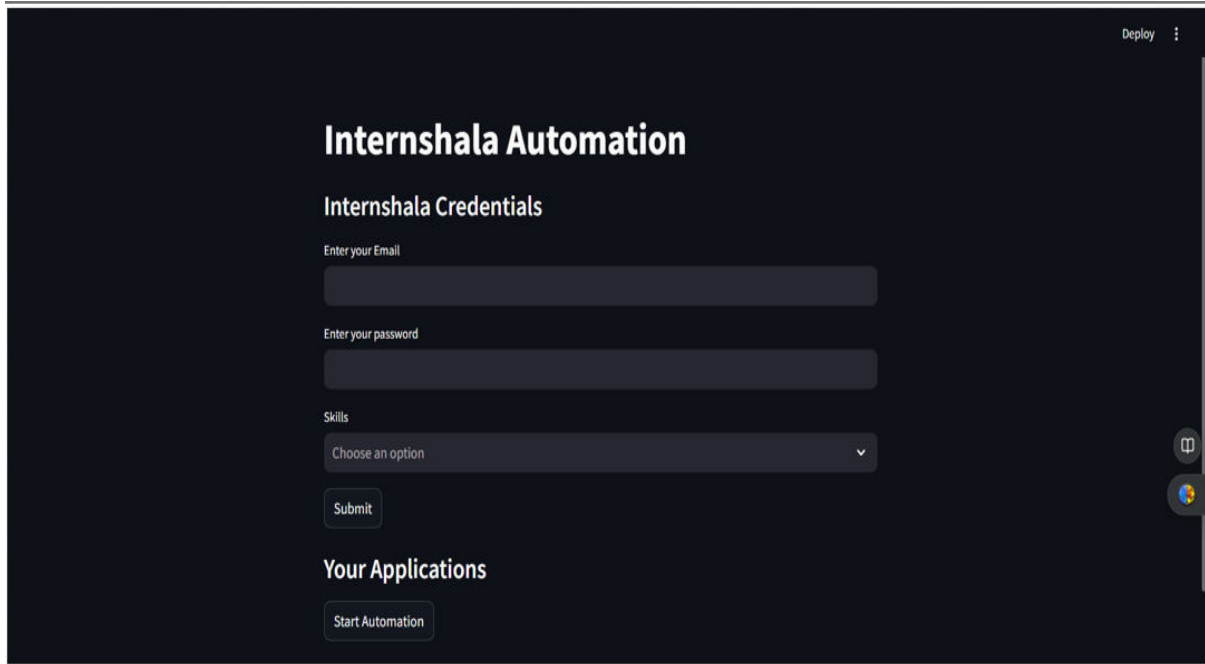
Positive feedback from users suggests that the tool meets their needs and expectations. The high satisfaction rates indicate a successful alignment between user needs and system capabilities. However, suggestions for further enhancements, such as additional filtering options, indicate that there is room for improvement. Future iterations of the tool can incorporate advanced features based on user feedback, ensuring continual development and refinement.

### e) Challenges and Limitations

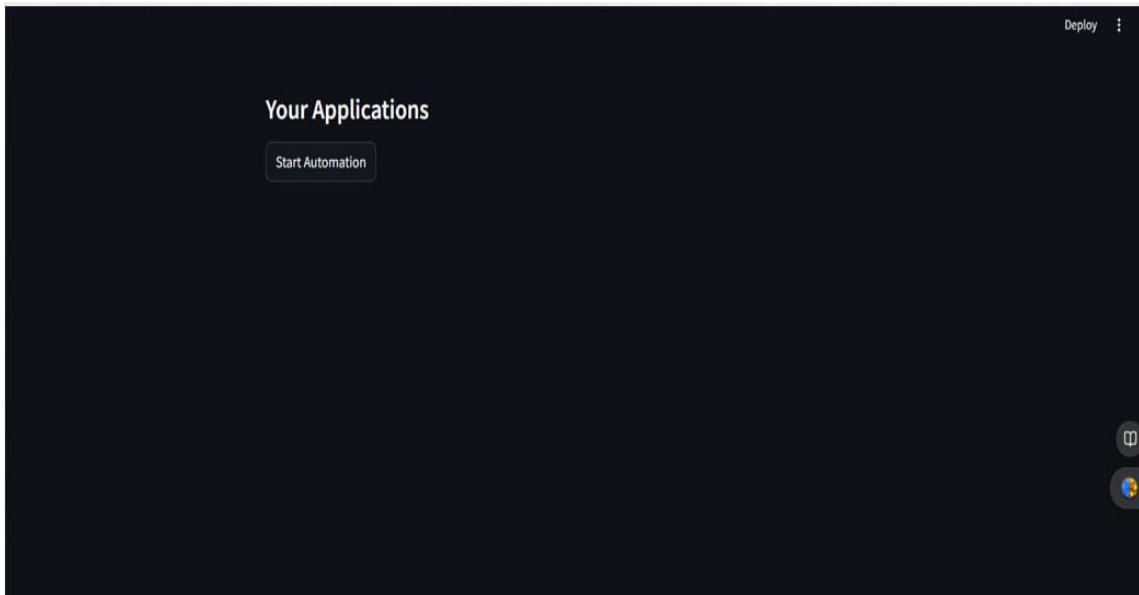
Despite the overall positive outcomes, certain challenges were encountered during the project:

- **Compliance Issues:** Continuous monitoring was necessary to ensure that the automation process adhered to Internshala's terms of service. Automated interactions need to remain ethical and within platform guidelines to prevent account suspension.
- **Website Changes:** Changes to the Internshala website structure could potentially disrupt the scraping process, necessitating ongoing maintenance and updates to the scraping scripts.
- **Data Privacy Concerns:** Ensuring the protection of user data and compliance with data privacy regulations (such as GDPR) remains a top priority.

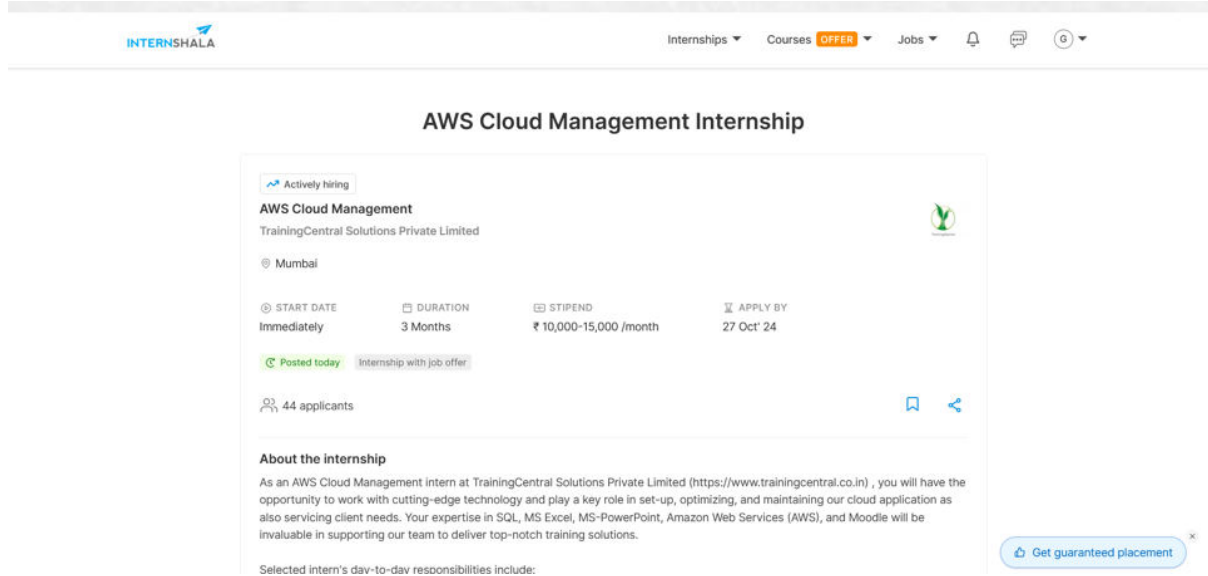
- **User Interface**



- **Application Page**



- Automation



The screenshot shows a job listing on the Internshala platform. The job title is "AWS Cloud Management Internship" by TrainingCentral Solutions Private Limited, located in Mumbai. Key details include: Start Date: Immediately, Duration: 3 Months, Stipend: ₹ 10,000-15,000 /month, and Apply By: 27 Oct '24. The job is marked as "Posted today" and "Internship with job offer". It has 44 applicants. The "About the internship" section describes the role as an AWS Cloud Management intern, involving working with cutting-edge technology, optimizing cloud applications, and servicing client needs. The role requires expertise in SQL, MS Excel, MS-PowerPoint, Amazon Web Services (AWS), and Moodle. A "Get guaranteed placement" button is visible at the bottom right.

## V.CONCLUSION

The Internshala Automation project aimed to streamline the process of searching for and applying to internships by automating key tasks such as web scraping, filtering internships, and submitting applications. Through the use of modern automation tools and web technologies, the system has shown to be both efficient and user-friendly, yielding significant time savings and improving the accuracy of internship applications.

The automation of Internshala's operations, whether applied to the application process, candidate shortlisting, communication, or reporting, has led to significant improvements in efficiency and accuracy. Through the use of scripts, APIs, or robotic process automation (RPA), routine tasks such as handling applications, sending automated emails, and filtering candidates based on predefined criteria were streamlined, allowing more time to be spent on strategic activities like personalized student engagement and partnerships.

**a) Key Takeaways:**

- **Improved Efficiency:** The automation system demonstrated a high scraping efficiency rate of 96%, effectively gathering relevant data from Internshala's platform. With an application success rate of 80% and form-filling accuracy of over 93%, the tool reduced the chances of manual errors, ensuring higher submission reliability.
- **Significant Time Savings:** The system successfully reduced the time spent searching for and applying to internships from an average of 60 minutes manually to just 15 minutes using automation. This time saving of 45 minutes per session highlights the significant impact of automation on user productivity.
- **User Satisfaction:** Feedback from users was overwhelmingly positive, with 85% expressing satisfaction with the tool's overall performance and 95% acknowledging the time-saving benefits. The intuitive interface and straightforward functionality ensured a smooth user experience.
- **Challenges Addressed:** Despite a few challenges, including ensuring compliance with Internshala's platform rules and adapting to potential website changes, the system maintained high performance. Continuous monitoring and updates to the automation scripts helped mitigate these issues.

**b) Future Scope:**

- a) Looking forward, the tool can be enhanced with additional features such as advanced internship filtering options, personalized recommendations based on user preferences, and notification systems for new internship opportunities.

Ongoing maintenance will be necessary to adapt the system to any changes in Internshala's website structure and policies.

- b) Overall, the Internshala Automation project achieved its objectives of simplifying and optimizing the internship search and application process, making it an invaluable tool for students and professionals seeking internships. With future enhancements, the system can continue to evolve, providing even greater value to users.

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