Abstract

In the current Industrial sector a lot of time, effort and resources are wasted on the scouting, recruiting or hiring of the candidates required for any job by the company. In this project our objective is to simplify the process and prevent the loss of such precious time and resources by automating the necessities. We intend to build a system through which these activities can be done easily while absolutely reducing the effort required and accomplish top quality results.

Chapter 1

1.1 Introduction

The "Auto Hiring" has been developed to search for relevant and best candidates, which has always been a challenge and which also takes a lot of time and money. Hence we have automated a few manual time consuming task such as candidate search, data entry, and managing talent pool. Despite this being a starting step, the developed tool is expected to help the recruiter by reading through thousands of profiles to hire just for one single role. Helping to avoid external vendor expense and valuable HR time that can be utilised in candidate interactions resulting in huge savings. In addition to this, the tool has predictive capabilities and uses logic to produce a skill relevance score and CV JD matching score.

A tool which makes selecting candidates a hassle free job. If you input the field and the skills you're looking for in a candidate along with the location, qualification and minimum number of years of experience, AutoHire will scrape Linkedin profiles best suited for your criteria and score the candidates based on the skills required and an overall score for the profile. While scraping the profiles, it will be sending Linkedin messages telling them you are a recruiter and will attach a link of a form that the candidates can fill if they are interested. The interested candidates' details can be viewed on 'See who's interested'. The details of every profile can be viewed on 'View Saved Data'.

Chapter 2

2.1 Scope of the project

This is a highly scalable project as we are adding value to the different industries and an idea that could revolutionize the Industry as we know it. Through this project our objective is to:

- Simplify the Candidate recruitment process by making it easier for the companies to find capable candidates.

- To present the company with highly capable and qualified candidates for their requirements therefore building organic trust and bond with the companies.

- To reduce the amount of money and time wasted on the recruitments therefore saving companies precious resources to focus on their growth and development.

- To automatically get in contact with the potential candidates on behalf of the company to check if they are interested in being hired.

2.2 Uses of Functionalities

Admin - The admin is responsible for the whole application and all the features or the functions of the application can be accessed by the Admin. The Admin has access to :

- The homepage through which all other accesses are possible.

- The search and filter options for new candidate.

- The saved data of all the details of the candidates in the past.

- The scores of all the candidates and their skills.

- The replies of the candidates to the provided offer.

Chapter 3

3.1 Design Diagrams

Candidate Table

Variable Name	Null ?	Variable Type
name	Not Null	VARCHAR2(40)
phone	Not Null	VARCHAR2(10)
Email	Not Null	VARCHAR2(40)
headline		VARCHAR2(30)
company	Not Null	VARCHAR2(30)
school		VARCHAR2(30)
location	Not Null	VARCHAR2(40)
summary		VARCHAR2(80)
skills		VARCHAR2(20)
publication		VARCHAR2(30)
certifications		VARCHAR2(40)
courses		VARCHAR2(40)
projects		VARCHAR2(80)
honors		VARCHAR2(40)
languages		VARCHAR2(40)
organizations		VARCHAR2(40)
interests		VARCHAR2(30)
Experiences_title		VARCHAR2(40)
Experiences_company		VARCHAR2(40)
Experiences_data_range		VARCHAR2(40)
Experiences_location		VARCHAR2(80)
Experiences_description		VARCHAR2(80)
Company_name		VARCHAR2(40)

Company_size		VARCHAR2(10)
Company_type		VARCHAR2(40)
Company_description		VARCHAR2(80)
Company_industry		VARCHAR2(40)
Company_location		VARCHAR2(40)
Company_num_employees		VARCHAR2(40)
Company_specialities		VARCHAR2(80)
Company_website		VARCHAR2(50)
Company_year_founded		VARCHAR2(10)

Contact Table

Variable Name	Null ?	Variable Type
Name	Not null	VARCHAR2(40)
Email		VARCHAR2(40)
Phone		VARCHAR2(10)
Message		VARCHAR2(80)

Scored Table

Variable Name	Null ?	Variable Type
Name		VARCHAR2(40)
Company		VARCHAR2(30)
Location		VARCHAR2(40)
Total_org		VARCHAR2(40)
Tenure_cur		VARCHAR2(40)
Total_tenure		VARCHAR2(40)
lnk		VARCHAR2(40)
Skill_score		VARCHAR2(40)
score		VARCHAR2(100)

ER Diagram
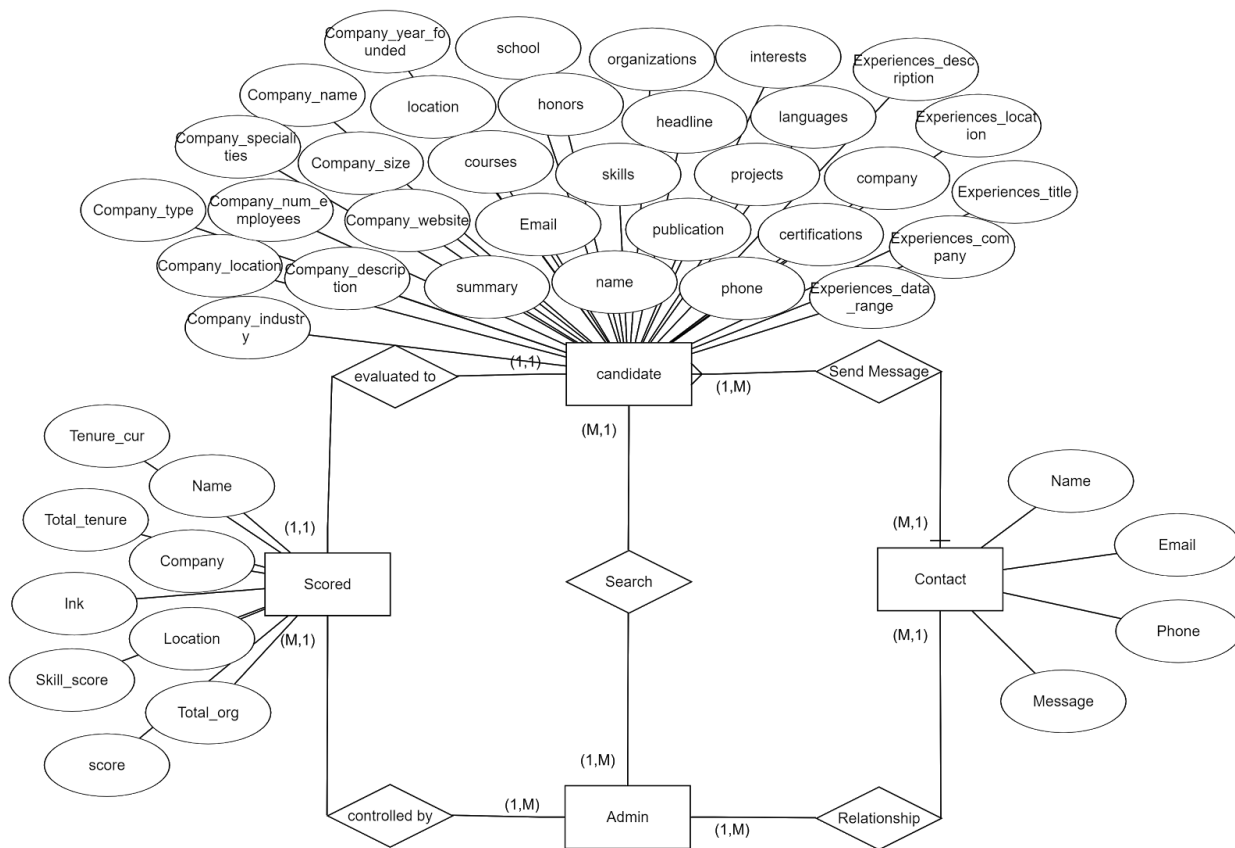
Data Flow Diagram
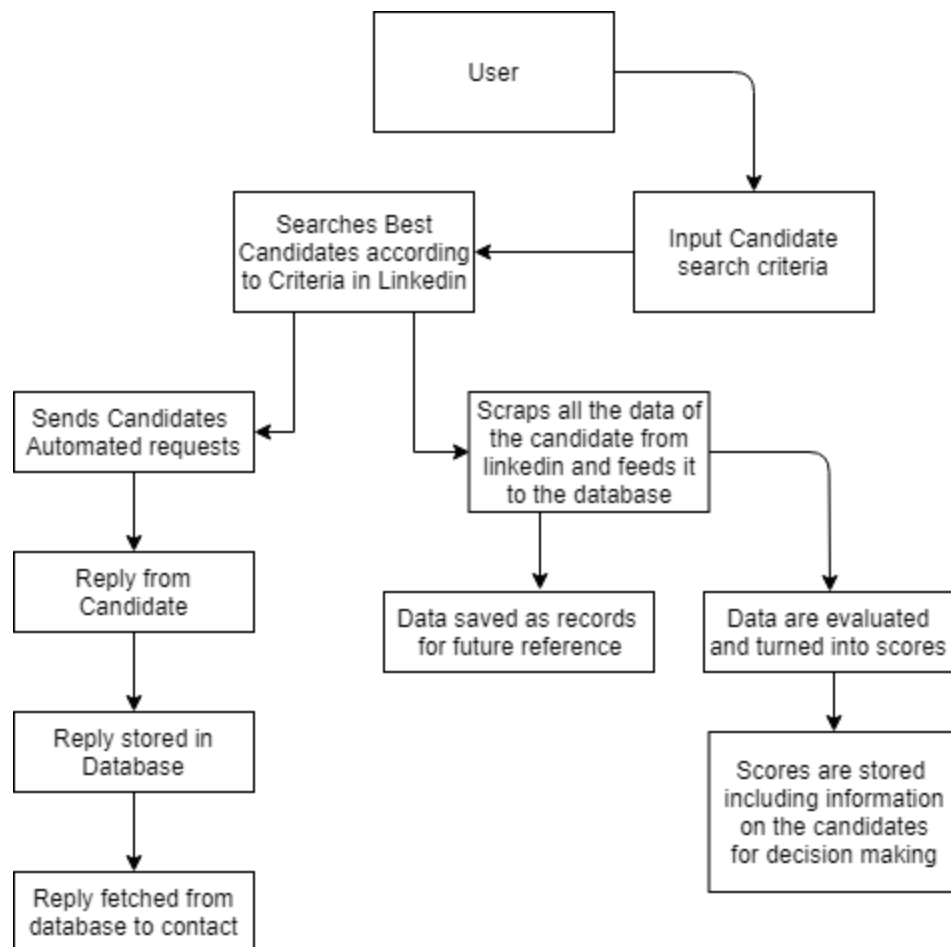
Chapter 4

4.1 Software requirement

- **Integrated Development Environment(IDE) -** Spyder3

- **Database -** sqlite3

- **Framework -** Flask, selenium

- **Languages -** Hyper Text Markup Language(HTML),Cascading Style Sheet(CSS), javascript(JS)

- **Platform -** windows OS

- **Server -** Web Server Gateway Interface(WSGI)
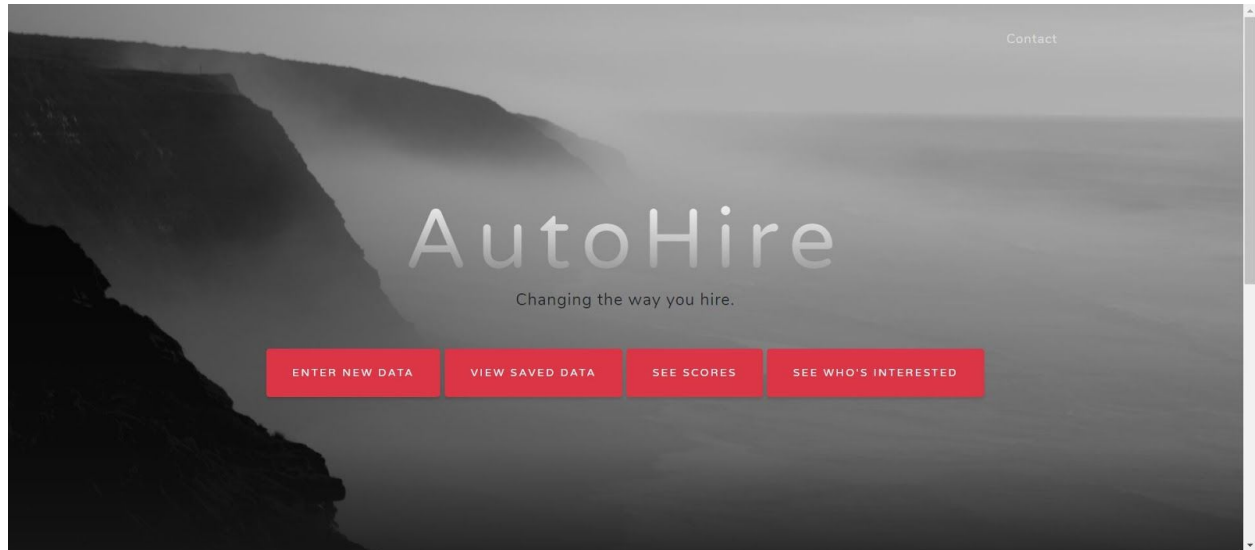
4.2 Hardware requirement

Minimum Hardware Requirements are:

System: Windows 7 or above

RAM: 512 MB or above

Hard disk drive: at least 500MB free

Chapter 5

5.1 Results and discussion

Screenshot 1: This is the home page, it is used to access all other modules of the application.

Screenshot 2: This module is used to search for candidates, you have to specify what kind of candidate are you looking for then it will scrape linkedin for the best candidate according to your specification and a link is sent to which they can reply if they are interested.

Screenshot 3: This module is used to record and store the data of all the candidate ever scraped to help access data if required.

name	phone	email	headline	company	school	location	summary	skills	publications	certifications	courses	projects	honors	languages	organizations	interests
Raja Sekhar Reddy Donthireddy			Software Developer, Data Science & Machine Learning	First American India Pvt Ltd	CM Engineering College	Bengaluru Area, India	I am a continuous learner and i believe in "Learning as a part of life". Interested in learning new skills and working on challenging roles and enjoy creating and learning new ideas and putting them into practice. ...	,HTML,C,SQL,Microsoft Office,C#,.NET,Software Development,Scrum,C++,Microsoft SQL Server,Machine Learning,R,JavaScript,ASP.NET MVC,Data Science,HTML5,Python,CSS,XML,CSS3,Silverlight		Developing Data Products	Regression Models	Machine Learning	Practical Machine Learning	Reproducible Research	Statistical Inference	Exploratory Data Analysis	Getting and Cleaning Data	R Programming	The Data Scientist's Toolbox	Architecture in Practice	Budgeting and Scheduling Projects	C# Fundamentals: Development for Absolute Beginners	Communication in the 21st Century Workplace	Developer Productivity: What's New in C# 6	Developing Universal Windows Apps with C# and XAML	Effective Problem-Solving and Decision-Making	Fundamentals of Management	HTML5 & CSS3 Fundamentals: Development for Absolute Begin...	Initiating and Planning Projects			English	Hindi	Kannada	Tamil	Telugu	First Aureate (Toast Master Club)	Predictive Analytics Netw (PAN)	Linked Arianna HuffingtonAriar Huffington is a Linkedin Influencer	HC Technologies	IBM	Gartner
Amit Kumar			Practice Lead - Data Science	Infosys	Devi Ahilya Vishwavidyalaya	Bengaluru, Karnataka, India	Over 10 Years of Experience in Analytics, Business Intelligence, Analysis & MiningCurrently Associated with Infosys Ltd., Bangalore as Practice Lead.Competent at Project Management and Problem Solving. Strong Analytical Ability – Quantitative	,Analytics,Data Analysis,SAS,Business Intelligence,Data Mining,Analysis,CRM,Management,Statistical Modeling,Business Analysis,SQL,Statistics,Databases,Project Management,Access,Predictive Modeling,Market Research,SPSS,Recruiting,Data Modeling,Oracle,R,Business Analytics,Segmentation,Forecasting,Project Planning,Training,Customer	Automotive Industry Certification Program				FY'13 Esprit Award	India Summit Awards	India Summit Awards	Best Buddy	English	Hindi		Data Science Central	Satya NadellaSatya Nadella is a Linkedin Influencer	KDnuggets Machine Learning, Data Science, Data

Screenshot 4: This is the module where the data of the candidate is evaluated and converted in a score. This helps to draw a comparison among the candidates and helps the company in decision making.

name	company	location	total_org	tenure_cur	total_tenure	lnk	skill_score	score
Arvind Tolambiya, PhD	Kogentix Inc.(acquired by Accenture Applied Intelligence)	Hyderabad, Telangana, India	4	34	159	Profile	87	4285
Amit Kumar	Infosys	Bengaluru, Karnataka, India	7	34	164	Profile	47	4055
Raja Sekhar Reddy Donthireddy	First American India Pvt Ltd	Bengaluru Area, India	1	70	70	Profile	100	3030
Data Science Trainer Machine Learning Deep Learning AI NLP Trainer	Self-Employed	Hyderabad, Telangana, India	1	46	46	Profile	50	1925

Go back to home page

Screenshot 5: This is the form that the link sent to the candidates lead to. If the candidate is interested they can reply.

Contact info

Name

Enter name

Email Address

✉ Enter email

Phone Number

📞 Enter phone number

Message

Message

Send

Screenshot 6: This is the module where the reply from the candidates after we send our requests or offers are recorded and displayed. This informs us which candidates might be interested in joining us.

name	phone	email	message
simanta sarkar	07278 055903	simonsimanta@gmail.com	I find the proposed job interesting and matched by my profile and career goal.
Rhea Bonnerji	09051558103	rhea_bonnerji@yahoo.com	Thank you for reaching out about this opportunity—it sounds like a great job and aligns with where I'd like to take my career. I'm eager to learn more.

Go back to home page

Chapter 6

6.1 Future Scope

Despite being a potential game changing application it is no where near its full potential. Creating modules through which an Organisation can register to the application and directly access it for their respective purposes without the need for Admin. Improvement in the Automated messenger would be required. Better way to display and manage the candidate history could also improve the application.

6.2 Conclusion

The importance and the value of this project resides in the dire need for industry to simplify their hiring process. This is an excellent project as it adds value to the industrial sector. Making this project was very educational and helped understand value creation through problem solving. The application of these kind of application using automation can be used in various fields to automate and reduce human effort from being wasted.