



ASSIGNMENT 1 FRONT SHEET

Qualification	BTEC Level 5 HND Diploma in Computing			
Unit number and title	Unit 06: Managing a Successful Computing Project			
Submission date	June 12, 2019	Date Received 1st submission		
Re-submission Date		Date Received 2nd submission		
Student Name	Huynh Thai Hieu	Student ID	GCD18314	
Class	GCD0821	Assessor name		

Student declaration

I certify that the assignment submission is entirely my own work and I fully understand the consequences of plagiarism. I understand that making a false declaration is a form of malpractice.

Student's signature	

Grading grid

P1	P2	P3	P4	M1	M2	D1





☐ Summative Feedback:		☐ Resubmission F	eedback:
Grade:	Assessor Signature:		Date:
Internal Verifier's Commer	nts:		
IV Signature:			





PROJECT MANAGEMENT PLAN of VIRTUAL RECRUITMENT ASSISTANT: SRBot

Huynh Thai Hieu Research and Development department, Seatek Recruitment Solutions ®



TABLE OF CONTENTS

PROJECT CHARTER	
INTRODUCTION	
Project Aims	
Project Objectives	
PROJECT MANAGEMENT APPROACH & PROCESSING METHODOLOGY	8
PROJECT SCOPE	10
PROJECT MILESTONE LIST	
PROJECT COMMUNICATION	
Project communication matrix	
Team structures	13
PROJECT SCHEDULE & WORK BREAKDOWN STRUCTURE	15
Work breakdown structure	15
Project schedule	16
Research and Planning phase	16
Construction phase	
Delivery and maintenance phase	17
Project schedule management plan	18
Project schedule Activity estimation	18
Project schedule controlling	18
PROJECT COST MANAGEMENT	19
Project cost estimating	19
Human-resource cost estimating	19
Other required components cost estimating	20
Project cost management plan	20
PROJECT RISK MANAGEMENT	21
Project Risk matrix	21
Risk management plan	21
PROJECT QUALITATIVE & QUANTITATIVE RESEARCH	22
Project qualitative research	22
Project quantitative research	23
DEEEDENCES	26



PROJECT CHARTER

1. General Project Information				
Project Name: Virtual Recruitment Assistant: SRBot				
Executive Sponsors:	Chief Technology Officer – CTO of Seatek Recruitment Solutions			
Department Sponsor:	Research and Development Department of Seatek Recruitment Solutions			
Impact of project: Upgrade the company's recruitment solution system into a far superi				

2. Project Team

	Name	Department	Telephone	E-mail
Project Manager:	Huynh Thai Hieu	Research and Development Department	+849055106 23	thaihieuhuynh1752@gmail.com
Team Members:	Le Phuoc Anh Khoa	Research and Development Department	+849354560 98	khoalpa2000@gmail.com
	Tran Le Bach Tung	Research and Development Department	+849837877 87	tungtlb2000@gmail.com
	Tran Quang Huy	Research and Development Department	+849077108 10	mifado95@gmail.com
	Tran Ngoc Thanh	Research and Development Department	+849332133 24	thanhtn99@gmail.com
	Huynh Le Minh	Research and Development Department	+849833287 77	minhhl99@gmail.com
	Nguyen Tuan Anh	Research and Development Department	+849545677 68	anhnt95@gmail.com
	Nguyen Hoang Long	Research and Development Department	+849554675 78	longnh2000@gmail.com



Duong Nguyen Quynh Giang	Customer Representative Department	+849433455 43	giangdnq97@gmail.com
Ho Ngoc Tram Anh	Customer Representative Department	+849223944 98	anhhnt96@gmail.com
Thai Van Hoang Huy	Recruitment Solution Department	+849227877 67	huytvh99@gmail.com
Vo Thanh Duc	Recruitment Solution Department	+849665135 43	ducvt2000@gmail.com
Ho Hoang Thien Minh	Recruitment Solution Department	+849887765 54	minhhht89@gmail.com

3. Stakeholders (e.g., those with a significant interest in or who will be significantly affected by this project)

Nguyen Quang Tung – CEO of Seatek Recruitment Solutions

Le Thi Ngoc Anh – Head Manager of Recruitment Solution Department – Seatek Recruitment Solutions

Truong My Quyen – Head Manager of Customer Representative Department – Seatek Recruitment Solutions

Jobster.io from KE Solutions (Canada) – The world's first AI-informed career advisory platform

4. Project Scope Statement

Project Purpose / Business Justification

The development of **Project: Virtual Recruitment Assistant: SRBot** is in purpose of upgrading current human-based recruitment solution system into a far superior and efficient system by implementing AI technologies.

Objectives (in business terms)

- Reduce the time-frame of resume scanning process by 4 times
- Reduce the cost of hiring employees to scan and analyze resumes
- Increase applicants (employees looking for a job) amount
- Increase quality of recruiting solutions by providing suggestions through Al's CV-analysis



Deliverables

- Improved resume scanning & filtering process
- Improved the success rate of hiring suitable employee based on auto-data-analyzed suggestions
- Upgraded current human-based system into advanced, AI technology-implemented system

Scope

This project is for the creation (including the planning, design, development, testing and transition) of an AI-based recruitment solution system that will advance current human-based recruitment solution system of the company into a whole new level. This system will have a UI as an virtual assistant application that provide following features:

- CV, Portforlio scanning & analyzing
- Self-learning about the customer company's business information, culture and their needs
- Ranking applicants based on comparison between the applicant's data and the customer company's data
- Provide the calculated suitable rate of both applicant and customer company

Project Milestones

- **Inception phase** (Project Idea planning, Stakeholders identification, team member filtering):
 - Start: 20 May 2019 End: 2 June 2019 Status: **Done**
- **Planning phase** (Concept planning; Cost, Timeframe, Case studies, Quantitative & Qualitative researches; Technology identifications; Risk identifications)
 - Start: 3 June 2019 End: 30 June 2019 Status: Doing
- Construction phase
 - Start: 1 July 2019 End: 1 December 2019 Status: Pending
- Delivery & maintenance phase
 - Start: 2 December 2019 End: 2 December 2020 Status: Pending



Major Known Risks (including significant Assumptions)

Risk	Risk Rating (Hi, Med, Lo)
Lack of stakeholder's involvements	High
Team member's attitude & abilities	Medium
Costs during development got underestimated	High

Constraints

- The interactions, understanding and working together ability between members from related departments
- The interaction and monitorization from stakeholders to the project, as well as their understanding about the characteristics of the project

External Dependencies

This project success depends on coordination between the project team and:

- Jobster.io platform developer team (for technology exchanging and mentoring)
- Recruitment Solution Department
- Customer Representative Department

5. Communication Strategy

Communication method:

- Updating project progress report to the Executive Sponsor every Friday afternoon
- Have a meeting that consist every stakeholders each month and in the end of each project milestone

Frequency of status reporting:

 One fixed team member will be responsible for project documenting and reporting every weekend



6. Sign-off				
	Name	Signature	Date (MM/DD/YYY Y)	
Executive Sponsor	Huynh Xuan Hoang			
Department Sponsor	Huynh Thai Hoa			
Project Manager	Huynh Thai Hieu			
7. Notes				



INTRODUCTION

Seatek Recruitment Solutions (SRS) has been successful in building a solid reputation to become one of the nation's most trusted Search Recruitment Specialists, by providing the best personal service and exceptional quality to both clients and candidates involved.

With over 25 years of proven experience sourcing candidates in various fields and unique professions nationally, now with the expansion of AI technologies, SRS believes that new technological developments, such as Project: Virtual Recruitment Assistant: SRBot will enable our team to develop a recruitment solution system far superior to what is currently available.

PROJECT AIMS

Project: Virtual Recruitment Assistant: SRBot aims to:

- Automate all time-consuming tasks such as: resume screening and interview scheduling
- Provide candidates sourcing based on company's needs
- Improve quality of hire by providing suitability predictions based on candidate's data
- Reduce bias

PROJECT OBJECTIVES

The development of this project is in order to satisfy following objectives:

- Reduce the time-frame of resume scanning process by 4 times
- Reduce the cost of hiring employees to scan and analyze resumes
- Increase applicants (employees looking for a job) amount
- Increase quality of recruiting solutions by providing suggestions through Al's CVanalysis



PROJECT MANAGEMENT APPROACH & PROCESSING METHODOLOGY

In order to accomplish this project successfully, **Agile methodology** will be implemented to perform the project management approach.

Agile methodology is a type of process where demands and solutions evolve through the collaborative effort of self-organizing and cross-functional teams and their customers, made up of four fundamental values and 12 key principles:

Values:

- Individuals and interactions over processes and tools
- ➤ Working software over comprehensive documentation
- Customer collaboration over contract negotiation
- Responding to change over following a plan

Principles:

- Customer satisfaction through early and continuous software delivery
- > Accommodate changing requirements throughout the development process
 - > Frequent delivery of working software
 - ➤ Collaboration between the business stakeholders and developers throughout the project
 - > Support, trust and motivate the people involved
 - Enable face-to-face interactions
 - Working software is the primary measure of progress
 - Agile processes to support a consistent development pace
 - Attention to technical detail and design enhances agility
 - Simplicity
 - Self-organizing teams encourage great architectures, requirements and designs
 - > Regular reflections on how to become more effective

This **Agile methodology** allows the Project Manager and other stakeholders to assess and examine the direction of the project during its life cycle. The Project Manager, Huynh Thai Hieu, has the overall authority and responsibility for managing and executing this project according to the Project Development Plan.

The project team will consist of personnel from:

- Research and Development Department: 7 members
- Customer Representative Department: 2 members
- Recruitment Solutions Department: 3 members

Because of the complexity, as well as the uncertainty of this AI technology-implementation project, **Agile methodology**, with six main deliverables that track progress and create: product vision statement, product roadmap, product backlog, release plan, sprint backlog



and increment, will establishes itself as a management methodology that places an emphasis on collaboration, reducing risks and made a high product quality, therefore, higher customer satisfaction.



PROJECT SCOPE

The scope of SRS's SRBot project includes the planning, design, development, testing and transition of the SRBot: Virtual Recruitment Assistant software package. This AI-based software will meet or exceed organizational software standards and additional requirements established in the Project Charter. The scope of this project also includes completion of all documentation, manuals and training aids to be used in conjunction with the software, as well as the collaboration and satisfaction from stakeholders and customer companies.

Project completion will occur when the software and documentation package has been successfully executed and transitioned to SRS's Recruitment Solution Department for application with other customer companies that looking for recruitment solutions.

All SRBot project work will be performed internally and no portion of this project will be outsourced. The scope of this project may include changes in customer's requirements to do future software updates.

PROJECT MILESTONE LIST

The below chart lists the major milestones for the SRBot – Virtual Recruitment Assistant project. This chart is comprised only of major project milestones. There may be smaller milestones which are not included on this following chart but are included in the Project Schedule and Work Breakdown Structure (WBS). If there are any scheduling delays which may impact a milestone or delivery date, stakeholders and the project manager must be notified immediately so proactive measures may be taken to mitigate slips in dates.

Any approved changes to these milestones or dates will be communicated to the project team & stakeholders by the project manager.

Milestone	Description	Begin date	Status
Complete Inception Phase	Complete Project Idea planning	20 May 2019	
	Complete Stakeholders identification	20 May 2019	Done
	Complete Team member filtering	20 May 2019	
Complete Planning Phase	Complete Project concept planning	2 June 2019	Doing



	Complete Qualitative & Quantitative research	2 June 2019		
	Complete Case studies & technology identification	7 June 2019		
	Complete Work Breakdown Structure & Project Schedule planning	24 June 2019		
	Complete Cost & Timeframe planning	26 June 2019		
Complete	Complete SRBot's Back-end functions	1 July 2019		
Construction Phase	Complete SRBot's Front-end interface	1 October 2019	Pending	
	Complete SRBot Testing and Debugging	21 October 2019		
Complete Delivery Phase	Complete SRBot system and documentations	2 December 2019		
	Complete transitioning SRBot system to Recruitment Solution Department to operate	10 December 2019	Pending	
	Complete Apple App Store & Android CH Play client-side application delivery	10 December 2019		
Complete Maintenance Phase	Complete SRBot status, performance and quality tracking	20 December 2019	Dandina	
	Complete system updating (if necessary)	20 December 2019	Pending	
		•	•	



PROJECT COMMUNICATION

PROJECT COMMUNICATION MATRIX

Communication type	Description	Update frequency	Format	Participants/ Distribution	Deliverables	Owner
Weekly status report	Email summary of project status	Weekly	Report via Email	Project Sponsor, Developer team and stakeholders	Status report	Project Manager
Weekly project team meeting	Meeting to review action register and status	Weekly	In person	Project team	Updated Action register	Project Manager
Project monthly review	Present metrics and status to team and sponsor	Monthly	In person	Project sponsor, Developer team and stakeholders	Status and Metrics presentation	Project Manager
Project's technical function review	Review of any technical designs or work associated with the project	As needed	In person	Project sponsor, Developer team and stakeholders	Technical Design Package	Project Manager
Project Gate review	Present closeout of project phases and kick-off next phase	As needed	In person	Project sponsor, Developer team and stakeholders	Phase completion report and Phase kick-off	Project Manager



TEAM STRUCTURES

Developer Team

Name	Title	Role	Email	Phone
Huynh Thai Hieu	Project Manager	Project Manager and Technical advisor	thaihieuhuynh1752@gmail.com	+84905510623
Le Phuoc Anh Khoa	Senior Developer	SQL, Java developer	khoalpa2000@gmail.com	+84935456098
Tran Le Bach Tung	Senior Developer	SQL, Java developer	tungtlb2000@gmail.com	+84983787787
Tran Quang Huy	Senior Developer	Python, Java developer	mifado95@gmail.com	+84907710810
Tran Ngoc Thanh	Senior Developer	Python, ReactJS developer	thanhtn95@gmail.com	+84933213324
Huynh Le Minh	Senior Developer	Java, ReactJS developer	minhhl99@gmail.com	+84983328777
Nguyen Hoang Long	Developer	Java developer	longnh2000@gmail.com	+84955467578
Nguyen Tuan Anh	Senior developer	Java developer	anhnt95@gmail.com	+84954567768

Research Team

Name	Title	Role	Email	Phone
Huynh Thai Hieu	Project Manager	Project Manager and Technical advisor	thaihieuhuynh1752@gmail.com	+84905510623
Duong Nguyen Quynh Giang	Customer Representative Officer	Customer needs researcher	giangdnq97@gmail.com	+84943345543



Name	Title	Role	Email	Phone
Ho Ngoc Tram Anh	Customer Representative Officer	Applicant needs researcher	anhhnt96@gmail.com	+84922394498
Thai Van Hoang Huy	Recruitment Solution Officer	Recruitment system requirements researcher	huytvh99@gmail.com	+84966513543
Vo Thanh Duc	Recruitment Solution Officer	Recruitment system requirements researcher	ducvt2000@gmail.com	+84966513543
Ho Hoang Thien Minh	Recruitment Solution Officer	Recruitment system requirements researcher	Minhhht89@gmail.com	+84988776554



PROJECT SCHEDULE & WORK BREAKDOWN STRUCTURE

WORK BREAKDOWN STRUCTURE

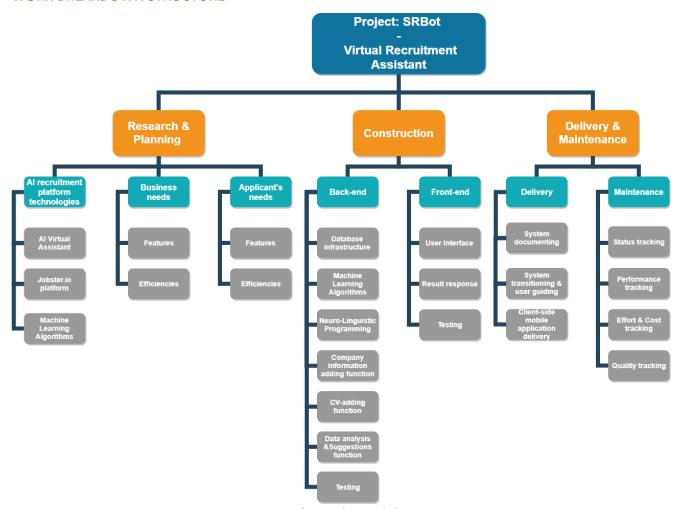


Figure 1. Project: SRBot's Work Breakdown Structure

The WBS for the SRBot Project is comprised of 3 work packages represents 3 main phases of the development process, which are Research & Planning phase, Construction phase and Delivery & Maintenance phase. In order to assign those work to team member, following Gantt Chart in next section will represents as the Project Schedule management.



PROJECT SCHEDULE

RESEARCH AND PLANNING PHASE

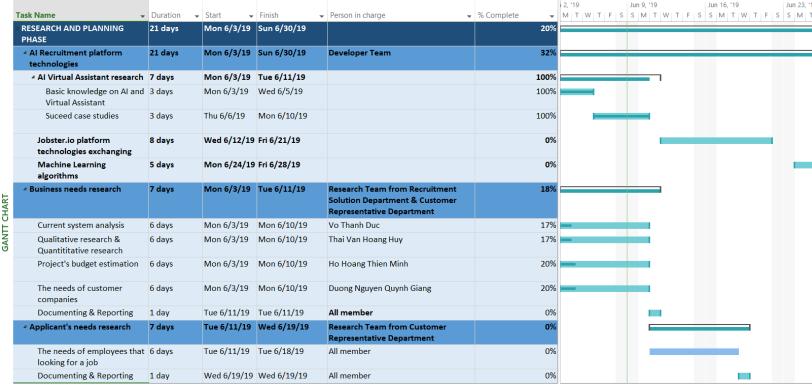


Figure 2. Project Schedule for Research and Planning phase



CONSTRUCTION PHASE

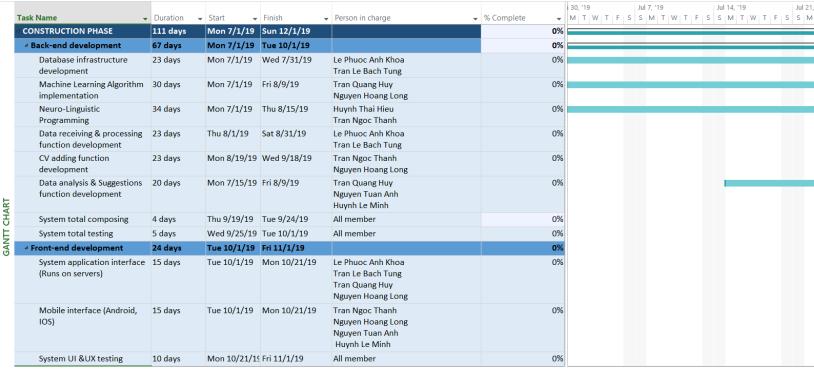


Figure 3. Project Schedule for Construction Phase

DELIVERY AND MAINTENANCE PHASE



Figure 4. Project Schedule for Delivery and Maintenance Phase



PROJECT SCHEDULE MANAGEMENT PLAN

PROJECT SCHEDULE ACTIVITY ESTIMATION

The SRBot Project Schedule activity estimation method is **Bottom-up estimating**. Since the duration of entire project cannot be estimated with a reasonable degree of confidence, each of the work within the project that got described in the WBS will be estimated and then aggregated into a total quantity for each of the activity's durations.

Moreover, with the help from Developer team of Jobster.io platform for technology mentoring, the SRBot Project Schedule can also be considered as using **Expert judgement** method.

PROJECT SCHEDULE CONTROLLING

In order to control the activity schedule of SRBot Project that fits all the requirements of timeframe, if the project falls behind the schedule and needs to catch up, the technique applied would be **Crashing schedule compression**.

Crashing analyzes and categorizes activities based on the lowest crash cost per unit time, allowing the team working of the project to identify the activities that will be able to deliver the most value at the least incremental cost. When the crashing approach is used, any additional costs associated with rushing the project will be reviewed by stakeholders, against the possible benefits of completing the project within a shorter time span.



PROJECT COST MANAGEMENT

PROJECT COST ESTIMATING

HUMAN-RESOURCE COST ESTIMATING

Phase	Name of the process	Amount of member participated	Work hours	Cost/hour	Total
Research and Planning	Al Virtual Assistant research	8 members of Developer Team	168 hours	\$10	\$13,440
	Jobster.io platform technologies exchange training				
Learnir algoriti	Machine Learning algorithms research				
	Business needs research	6 members of Research Team	56 hours	\$8	\$2,688
	Applicant needs research	2 members of Research Team	56 hours	\$8	\$896
				Subtotal:	\$17,024
Construction	Back-end development	8 members of Developer Team (6	536 hours	\$15 (Senior developer)	\$48,240
	Front-end development	Seniors & 2 Juniors)		\$13 (Junior Developer)	\$13,936
				Subtotal:	\$62,176
Maintenance	Delivery	8 members of Developer Team + 6	120 hours	\$8	\$13,440
	Maintenance	members of Research Team (from Recruitment Solution Dept.)	83 hours	\$5	\$5,810
				Subtotal:	\$19,250
		TOTAL			\$98,450



OTHER REQUIRED COMPONENTS COST ESTIMATING

Item	Model	Quantity	Cost/ unit	Total
Swervers	Dell PowerEdge R620 Server 2X 2.90Ghz E5-2690 8C 384GB 8X 512GB SSD OS: Ubuntu Server 2016	4	\$700	\$2,800

PROJECT COST MANAGEMENT PLAN

The Project Manager will be responsible for managing and reporting on the project's cost throughout the duration of the project.

For the SRBot Project, control accounts will be created at the fourth level of the WBS which is where all costs and performance will be managed and tracked. Financial performance of the SRBot Project will be measured through earned value calculations pertaining to the project's cost accounts. Work started on work packages will grant that work package with 50% credit, whereas the remaining 50% is credited upon completion of all work defined in that work package. Costs may be rounded to the nearest dollar and work hours rounded to the nearest whole hour.

Cost Performance Index (CPI) and Schedule Performance Index (SPI) will be reported on a monthly basis by the Project Manager to the Project Sponsor & Stakeholders:

- Variances of 10% or +/-0.1 in the cost and schedule performance indexes will change the status of the cost to yellow or cautionary.
- Variances of 20%, or +/- 0.2 in the cost and schedule performance indexes will change the status of the cost to red or critical.

These statuses will be reported and require corrective action from the Project Manager in order to bring the cost and/or schedule performance indexes back in line with the allowable variance status. Moreover, any corrective actions will require a project change request and must be approved by all stakeholders before it can be implemented.



PROJECT RISK MANAGEMENT

PROJECT RISK MATRIX

Risk category	Risk detail	Risk likelihood	Risk level	Acceptable to proceed?
Technical	Scope & Objective misalignment	Possible	Extreme	No
	Requirements changing	Possible	Medium	Yes
	Technical Process scaling	Possible	Medium	Yes
	Developed system does not provide enough data safety, security & reliability	Possible	High	No
	Testing phase does not cover all plots	Probable	High	No
Commercial	General Contract Terms & Conditions misalignment	Improbable	Extreme	No
	Project financing process misalignment	Possible	Medium	Yes
	Political & Legality misalignment	Improbable	Extreme	No
External	Weather conditions	Possible	Low	Yes
	Team member health conditions	Possible	Medium	Yes

RISK MANAGEMENT PLAN

The approach for managing risks for SRBot Project includes a methodical process by which the project team identifies, scores and ranks the various risks. Every effort will be made to proactively identify risks ahead of time in order to implement a mitigation strategy from the project's onset.

Risks with high impacts and likelihood will be added to the project schedule to ensure that the assigned risk managers take the necessary steps to implement the mitigation response at the appropriate time during the schedule.

Upon the completion of SRBot Project, during the closing process, the Project Manager will analyze each risk as well as the risk management process. Based on this analysis, the Project Manager will identify any improvements that can be made to the risk management process for future projects, these improvements will be captured as part of the lessons learned knowledge base.



PROJECT QUALITATIVE & QUANTITATIVE RESEARCH

PROJECT QUALITATIVE RESEARCH

In order to conduct a qualitative research for information gathering and data collection to generate the knowledge to support the development of this SRBot Project, the most appropriate method/ technique to be implemented should be Joint Application Development (JAD) Interviewing.

Joint Application Development (JAD) is a facilitated meeting or workshop designed to overcome the problems of traditional requirements gathering to agree a design for the information system that fully takes into account the views of users and other stakeholders.

JAD interviewing users by getting relevant stakeholders together in a meeting of a defined length and highly focused on outcomes and making decisions, which is to make clear the Project Aims and Objectives. In this SRBot Project situation, not only stakeholders that defined in the Project Charter involved in the process of the JAD interview, but also including:

- 4 Representative persons from the customer companies (including the companies that SRS has co-operated before and new companies that are looking forward to co-operate with SRS in the future)
- 5 un-employed employees that wanted to find a job through the SRS's job search system
- All member of SRS's Recruitment Solutions Department
- Experts from Jobster.io platform developer team

Question contents:

- Current user's experience of SRS's Recruiting Solution system (from perspective of recruiter companies and participant employees)
- Status, difficulties of current Recruiting Solution system (from perspective of members from Recruitment Solutions Department)
- How AI technologies can make positive impacts on current system, as well as entire business venture (from perspective of the leader of Research & Development Department, as well as from Experts)
- Features that the users wanted to have/ to improve



By having the participation of everyone that may impact or receiving impact from the development of the SRBot Project, from every perspective, including from experts of the current field (Jobster.io platform experts) to the end-user of the system (customer companies and participant employees), meeting and discussing together at the same time, same place has made the project's scope, aims and objectives became wide clear.

PROJECT QUANTITATIVE RESEARCH

In order to conduct a quantitative research for information gathering and data collection to generate the knowledge to support the development of this SRBot project, the most appropriate method is to design an online survey using Google Form with following questionnaire:





Seatek Recruitment Solutions system survey

This is a survey made in purpose to have a broader view about SRS current system, as well as receiving opinions for system's Al implementation. Thanks for your time doing this survey!!!

*Bắt buộc

1. May us know yo Chỉ đánh dấu m	
From 18-	A000A0000000
From 24-	
From 29-	
More tha	
Your current st	atus of employment? * ôt hinh ôvan.
() I'm havin	ng a great job and I love it!
	ng a job, but I'm considering to find another
	uit a boring job!
	not graduated! Internship is what I'm looking for!
	1 2 3 4 5
Really bad	Really good
By the scale fro provided to you Chỉ đánh dấu m	
	1 2 3 4 5
Totally unsuitable	le C Totally fit for me!
5. What is the poi system? Why?	int that you liked the most in our
What is the noi	int that you hated the most in



This questionnaire was made to send to the participated/ or participating employees who using or applying to SRS to find their job suggestions. With the data received from the results of this questionnaire, the Research team will have all necessary information from every employee participated to the current system, including:

- The common, average age of participants (therefore applying to the technologies baseline, since younger employees can be flexible to adapt new technologies)
- The employment status of participants (therefore can understand participants needs of job)
- Feedbacks from participants about current Recruitment Solution system (therefore can improve the Job suggestions feature when developing the SRBot)

In conclusion, by applying those two methods in qualitative and quantitative researches, the results gathered will be the main component to make the success of this entire SRBot project, where Project aims and objectives got defined clearly.



REFERENCES

Project Management Docs. 2019. Project Management Plan Template - Project Management Docs. [ONLINE] Available at: https://www.projectmanagementdocs.com/template/project-planning/projectmanagement-plan/. [Accessed 11 June 2019].

Management, P., 2017. A Guide To The Project Management Body Of Knowledge (PMBOK(r) Guide-sixth Edition / Agile Practice Guide Bundle (PMBOK Guide). Project Management Institute.