A Synopsis on

RESUME SCANNER USING PYTHON

Submitted in partial fulfillment of the requirements of the degree of

Bachelor of Engineering

in

Electronics and Telecommunication Engineering

by

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Mahim(West), Mumbai-400016 2020-2021

Introduction

Talent acquisition is an important, complex, and time-consuming function within Human Resources (HR). The sheer scale of Indias market is overwhelming [2, 8, 14]. Not only is there a staggering one million people coming into the job market every month, but there is also huge turnover. As per LinkedIn, India has the highest percentage of the workforce that is "actively seeking a new job" [10]. Clearly, this is an extremely liquid, massive marketŁbut one that also has many frustrating inefficiencies. The most challenging part is the lack of a standard structure and format for resume which makes short listing of desired profiles for required roles very tedious and time-consuming [11, 24]. Effective screening of resumes requires domain knowledge, to be able to understand the relevance and applicability of a profile for the job role. With a huge number of different job roles existing today along with the typically large number of applications received, short-listing poses a challenge for the human resource department. Which is only further worsened by the lack of diverse skill and domain knowledge within the HR department, required for effective

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Peer-review under responsibility of the scientific committee of the International Conference on Computational Intelligence and Data Science (ICCIDS 2019).

10.1016/j.procs.2020.03.284

screening. Being able to weed out non-relevant profiles as early as possible in the pipeline results in cost savings, both in terms of time as well as money [29].

Today the industry face three major challenges:

- Separating right candidates from the pack India being a huge job market and with millions seeking jobs; it ishumanly impossible to screen the CVs and find the right match. This makes the whole hiring process slow and inefficient costing resources to the companies.
- Making sense of candidate CVs Second challenges are posed by the fact that the CVs in the
 market are notstandard practically every resume in the market has different structure and format. HR
 has to manually go through the CVs to find the right match to the job description. This is
 resource intensive and prone to error whereby a right candidate for the job might get missed
 in the process.
- Knowing that candidates can do the job before you hire them -The third and the major challenge is mappingthe CV to the job description to understand if the candidate would be able to do the

job for which she is being hired.

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To overcome the mentioned issues in the resume short-listing process, in this paper we present an automated Machine Learning based model. The model takes the features extracted from the candidate's resume as input and finds their categories, further based on the required job description the categorised resume mapped and recommend the most suitable candidate's profile to HR. Our main contributions are listed below:

- 1. We developed an automated resume recommendation system.
- 2. Machine learning based classification techniques with similarity functions are used to find most relevant resume.
- 3. Linear SVM classifier performed best for our case compared to another ML classifiers.

Rest of the article organized as follows: section 2 describes the related works, the problem statement is stated in section 3. In section 4, we explain our proposed methodology, followed by results and conclusion in section 5 and 6 respectively.

Literature Review

Skill_Element_Name Java fronted

Skill_Component

OOPs , JDK tools, Exception Handling, Multithreading, File I/O, Collections, JavaScript, Jquery, Java Applet, Java, Web Application, Servlet and JSP Lifecycle, Servlet Context, JEE Concepts and Deployment Descriptor, Request Dispatcher, Working with Application Context, Session State management, Development Frameworks Concepts using Struts Model View Controllers, Containers, Components, Web/App Servers, Tomcat, Glassfish, IoC/DI, Spring Core, AOP Concepts.

Skill_Element_Name java Backend

Skill_Component

OOPs , Exception Handling, Multithreading, File I/O, Collections, SQL,Understanding CI/CD,Spring Core, beans including IOC and Dependency Injection, Spring Boot, Spring Transaction management,XML, JSON, data structure and parsers,Unit Testing, JUNIT,Sequence,Basic Understanding of the Class Diagrams,, Design Patterns,Java, Handson experience on Core Java, J2EE, Spring ,hibernate, web services, Rest,SOAP, API secuirty, Spring boot,spring cloud, Ant, Maven, Low level designing, JMS.

Skill_Element_Name Java script c++ Java

script

web designing, HTML5 / CSS3, JavaScript, Jquery,CSS ,BootStrap, Managing and working uploading a webpage on web server, Basic concepts for web designing, HTML5 / CSS3, JavaScript, Jquery,I, Web Server, uploading webpage.

C++

OOPs, C++,Inheritance Polymorphism,Compilation,Linkage,Compile time polymorphism,Function overloading,Operator overloading, Type Casting,Exceptions,C++,cast operators,C++ ExceptionNet fronted

OOPs, .NET framework, Exception Handling, Collections, Generics, IO and Serialization, Multithreading, Static code analysis, Unit Testing, Debugging, deploying, application, SQL queries, Database SOAP, Web Services, REST, .net framework, C#, Rest Service, API, Security, WCF, Azure Service Fabric, Docker, distributed/messaging technologies, microservices architecture style.

Net Backend

OOPs, .Net, Exception Handling, Collection, Generics, IO, Serialization, Multithreading, Static code analysis, Unit Testing, Debugging and deploying application, HTML 5, CSS3, Javascript, Jquery, ASP.Net, ASP.Net Validations, Caching, Session, state management, Page lifecycle, Web Services, SOAP, REST, Routing concepts, Routing XML, Windows Presentation Framework concepts, Windows Workflow Framework. s, standard exception classes.

Problem Statement

Today the major problem being faced across the industry is how to acquire the right talent, using minimal resources

over the internet and in minimal time. As described in section 1, there are three major challenges that are required to

be overcome, to bring efficiencies to the complete process.

- Separating the right candidates from the pack
- Making sense of candidate CVs
- Knowing that candidates can do the job before you hire them

Purpose Methodology/Implementation Plan

The aim of this work is to find the right candidates resume from the pool of resumes. To achieve this objective

The proposed model worked in mainly in two steps

- Prepare
- Deploy and Inference

Implementation Part 2

Two models have been built on the cleansed data

- Classification Based on the resume and category the model has been designed to categories the resume in the right category and Recommendation
- The model would create a summary of the resume and job description provided by the recruiter and give the list of most relevant resume based on the similarity between resume and jobs description

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