

AI-Based Resume Screening System Using Natural Language Processing and Machine Learning

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Abstract:

- *Efficiency: Ditch LinkedIn profiles and mountains of paper, opting instead for resume screening tools. Expect faster processing which reduces human workloads without losing precision.*
- *Consistency: A consistent resume screening process evaluates job applications fairly which can be hired when humans (and our many flaws) are involved. Automated resume screening tools rank candidates impartially so there's less of a chance of mishiring.*
- *Improved quality of hire: Artificial intelligence (AI) and machine learning (ML) resume screening tools use algorithms to assess keywords, job qualifications, and applicable experience. AI can identify exceptional candidates that manual screening may ignore. AI and ML tools also learn continuously, improving the selection process.*
- *Cost savings: An automated resume screening process can cut hiring costs. How? Users need fewer HR personnel and can allocate resources to critical hiring tasks. Time savings also cut costs, allowing recruiters to focus on honing a strategic hiring process.*
- *Flexibility: Automated resume screening scales smoothly as applicant volumes change. You'll find it easy to handle seasonal variations or business growth without losing quality or consistency.*
- *Resume enrichers go beyond resumes, giving HR teams a more detailed portrait of each candidate. They generate candidate profiles using social media activity, online portfolios, and other online resources.*
- *Without needing to meet or even speak to applicants, recruiters can gain insights into who they are. Hiring teams can make informed decisions about who would be a good cultural fit for their organization and whether candidates have the necessary soft skills to succeed.*
- *Resume enrichers are also useful because they suggest candidate potential. Resumes show achievements and experience. Enrichers are a bit more subtle and may highlight candidates who you would otherwise miss.*
- *However, they're heavily skewed toward candidates with an online presence. People who don't use social media or don't actively share their work in a digital sphere are disadvantaged. This may also favor younger over older applicants.*
- *AI resume screening software.*

Keywords: resume screening software

I. INTRODUCTION

At first glance, automated resume screening seems fairly simple, but looks can be deceptive. Because actually, screening candidates is hard work.

Recruiters face vast amounts of resumes and must handle each applicant fairly — a serious challenge when we factor in more than 200 cognitive biases that exist in humans. So, it's easy to take shortcuts and wave through the wrong candidates when you're screening manually.



Resume screening must also be precise. Little details like qualifications or specialist project experience can make all the difference when seeking the best candidates for a specific job. But it's hard to pinpoint essential skills based on generic resumes.

These problems influence your quality of hire. Poor screening can remove suitable candidates from your pipeline, so they never proceed to interviews or other assessments. Worse still, it also wastes time and resources. That's why automated screening tools are so popular.

Be aware of the following challenges of this type of technology:

- **Over-reliance on keywords:** Resume screening tools often compare keywords in resumes with job postings. This strategy can miss great candidates who deviate from key phrases. Keyword parsing also encourages job seekers to lean on keyword stuffing, potentially ruining your talent pool management.
- **Potential for more bias:** Algorithms trained on prejudiced data may inadvertently preserve unconscious biases. For instance, AI tools trained on male CVs have downgraded female applicants in the past. A recent study assessed 500 job descriptions and individual resumes, asking AI screening tools to recommend the best fit.

Researchers found a significant bias towards male names and a skew away from names associated with minorities. In that sense, AI screening remains a work in progress.

- **Technological limitations:** Screening tools can make mistakes when processing resume formats or layouts. Something as basic as failing to process PDF files can miss outstanding talent.
- **Difficulty recognizing non-traditional candidates:** Resume screening software struggles to assess non-conventional applicants like career switchers or qualified candidates with unorthodox work histories. These applicants could bring creativity and fresh perspectives to the role, but because they differ from "the norm," the technology could skip their potential.
- **Inability to assess soft skills:** Resume screening software also has trouble analyzing soft skills like communication, teamwork, and problem-solving. Keyword matching and qualifications may overlook essential qualities required by great candidates. We recommend employee skills testing to assess an applicant's overall fit and identify if they could bring any transferable skills to the role.

II. RELATED WORK

What is Resume Screening Software?

Resume screening software, often referred to as candidate screening software or resume parsing software, is a digital tool designed to assist recruiters and hiring managers in the initial stages of the candidate selection process. It automates the review and evaluation of resumes and job applications submitted by candidates for various positions within an organization.

Types of Resume Screening Software

1. ATS

Integration with an Applicant Tracking System (ATS) is a critical feature of automated resume screening software. ATS is a software application that helps organizations manage their recruitment process by organizing, tracking, and storing candidate information and job postings. Automated resume screening software and ATS systems are integrated so that data can flow seamlessly between them. This integration allows for a smooth transfer of candidate information and job requisitions. When a candidate applies for a job, their resume and application details are initially captured by the ATS. The ATS then forwards this information to the automated resume screening software for the initial screening process. As candidates progress through the recruitment process, their status and information are automatically updated in both systems. Recruiters can view screening results and other relevant data directly within the ATS interface. Greenhouse, JazzHR, Bullhorn, and SmartRecruiters are some examples of ATS software.



Read More: What is an ATS?

2. Standalone Resume Parsers

Standalone resume parsers are specialized software applications designed solely to parse and extract information from resumes. Unlike integrated parsers found within Applicant Tracking Systems (ATS) or other recruitment software, standalone parsers are dedicated tools focused exclusively on resume processing. Candidates submit their resumes in various formats, such as PDF, Word documents, or plain text, to a standalone resume parser. This can be done through email, a web form, or by uploading files. It scans the document to identify and extract specific data points, including personal information, work experience, education, skills, and contact details. The parser converts the extracted information into a structured format, such as JSON or XML, which can be easily processed and stored in a database or integrated with other recruitment systems. RChilli is an example of a standalone resume parser.

III. OBJECTIVES

By cutting down on wasted time and streamlining processes, resume screening is allowing recruiters to free up time. Screening candidates allows recruiters a broader overview of their candidates, making selection and prioritization easier and faster. By changing how recruiters get information, resume screening can change how hiring happens for the better.

1. Finding the Right Candidates Through Resume Screening

Resume screening software cuts most of the time-consuming work out of the equation. It's easier than ever for applicants to respond to every job listing with a few clicks, leaving recruiters with the daunting task of sorting through hundreds of irrelevant resumes. Resume screening software puts an initial filter on that huge applicant group, enabling recruiters to focus on the best-qualified applicants. They need new tools to meet heightened goals.

2. The Ducknowl Difference

Ducknowl is one resume screening option that integrates with ATS, as well as providing options for further review. Choosing Ducknowl means recruiters have a clear view of their best-qualified applicants from one platform. Using our customizable resume criteria and keyword weighting, recruiters create a focused pool of highly qualified candidates. Across the board,

recruitment is often a race against time. For our users, it's a simple, focused search for the best talent. Paired with video interview screening and skill assessments, recruitment boils down to prioritizing time all on one dashboard.

3. Your Time is Valuable

Unfortunately, many people in search of simple human resources tips find programs that might be useful in theory but are impractical in the fast-paced environment of a modern recruiter's office. With Ducknowl, we integrate with all the major ATS, allowing recruiters to work smarter and faster, but not harder. If you are looking for ways to save time, spending hours learning new software starts to feel counterproductive. We value your time as much as you do, which is why our platform is intuitive, user-friendly, and offers free training.

Given how recruiters' quotas rise every quarter, every HR department is on the hunt for the next powerful tool to make their team more efficient. Today, that tool is Ducknowl. We believe that the best resumes should get individual attention from recruiters. If you do too, find out firsthand just what we can do for you. To schedule a brief demo, click here.

IV. METHODOLOGY

What Is Methodology: Definition, Types, and Examples

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A methodology is the overall strategy and rationale behind how a research study is designed, conducted, and analyzed. It's bigger than any single tool or technique. Think of it as the blueprint for an entire research project: it explains why you're collecting data in a particular way, what assumptions guide your approach, and how all the pieces fit together to answer your research question. Methods, by contrast, are the specific tools you use to collect that data, like surveys, interviews, or experiments. Your methodology is the reasoning that tells you which tools to pick.



Methodology vs. Methods

These two terms get swapped constantly, but they refer to different things. Your research methods are the practical tools you use to gather data. A methodology is the larger framework that justifies those tools. If you're building a house, the methods are your hammer, saw, and drill. The methodology is the architectural plan that determines where every wall goes and why.

A methodology addresses deeper questions: What kind of knowledge are you trying to produce? Do you believe reality is something you can measure objectively, or is it shaped by people's experiences and perspectives? These philosophical foundations, sometimes called ontological and epistemological commitments, shape every decision that follows. They determine whether you count things with numbers or sit down and talk to people, whether you test a hypothesis or explore a question with no predetermined answer. Ultimately, both your methodology and your methods need to demonstrate a clear justification for the overall design of your research.

1. Reviewing resumes

One of the most common screening strategies is reviewing candidates' resumes. By using this traditional method, you can read through an overview of a candidate's most important qualifications, such as education and work experience. This method can take time, so it's best for situations when you have a low number of potential candidates. To screen resumes effectively, pay attention to:

- **Formatting:** The format of a resume can show a candidate's level of professionalism and attention to detail.
- **Employment gaps:** Many recruiters check for gaps in a candidate's employment. It's helpful to ask a candidate how they spent time in between jobs.
- **Spelling and grammar errors:** Spotting spelling and grammar errors can show a recruiter how thorough a candidate is, which can indicate how well they can perform certain detail-oriented jobs, like writing or coding.

Read more: [A Guide to Resume Screening for Recruiters](#)

2. Reading cover letters

You can also screen job candidates by reading their cover letters, which you can typically find attached to a job application. Reading cover letters can help you learn more about the candidate, including their goals and how they align with your company. You can also gauge a candidate's writing and organizational skills by reading their cover letter. If you plan to screen candidates using cover letters, be sure to ask for them in your job applications.

3. Conducting phone screenings

Many recruiters also complete phone screening, which involves completing an interview over the phone. To use this screening method, create a set of questions to ask each candidate, focusing on the characteristics that are most important to your company. Be sure to write down each person's responses so you can compare them.

4. Conducting video call screenings

You can also use video call screening. This adds a visual element to a typical phone interview, which allows you to see a candidate's expressions and body language. As with a phone interview, make sure you write down questions in advance. Throughout the interview, pay attention to how the candidate acts and the environment that they present onscreen. This can help you evaluate their professionalism.

5. Interviewing

Another screening strategy is in-person interviews, which can be a great way to learn more about a candidate in an even more in-depth setting than a video call. To complete screening interviews, ask standardized questions to each candidate and take notes on their responses and nonverbal cues. You can also complete group interviews to screen multiple candidates at once. Once you're done with the interviews, compare your notes and select the best candidates. Read more: [Screening Interviews: Everything You Need To Know](#)



6. Contacting references

Contacting professional references is another traditional method that you can use to screen job candidates. You can include space for references on job applications and contact the references that the candidates list. When you email or call a reference, try to ask questions that reveal details of the candidate's performance and work ethic, including:

- How did the candidate respond to feedback?
- Why did the candidate leave the organization?
- What are the candidate's strengths and weaknesses?
- Would you hire the candidate again if you could?

7. Searching candidates' social media

Many recruiters also screen candidates by reviewing their social media accounts to ensure that they're professional and aligned with the company's values. Typically, recruiters use social media searches to make sure a candidate shows positive characteristics and behaviors online. This can help you make sure your candidates represent your company favorably.

8. Using applicant tracking systems

You can also use an applicant tracking system, which is a software program that can automatically review resumes and select the candidates who best match your job descriptions. Applicant tracking systems can allow you to screen candidates very quickly, as they search for keywords in candidates' resumes. Therefore, this can be an effective screening strategy if you need to fill a position urgently. Read more: [What Are Applicant Tracking Systems? \(With Definition and Tips\)](#)

9. Conducting skill assessments

Conducting skill assessments is also a popular screening strategy, as it can help you gauge whether the candidate has the skill set required to excel at the job. These tests can show you how a candidate performs and applies their skills to a real-world situation. Skills assessments can be especially useful for roles that require specified skills, such as software development or editing positions. Read more: [Types of Assessments That Test Job Skills](#)

10. Offering paid employment trials

Another way that you can screen job candidates is by offering them paid employment trials, which are temporary employment periods before a full-time job offer. Using this strategy can help you gauge how an individual can actually perform at your company. If you choose to use this screening method, be sure to create an agreement with the candidate that outlines the terms of the trial, including its duration.

11. Conducting background checks

You can also conduct formal background checks to gain information about a candidate. They can uncover crucial information, like a candidate's past employment or criminal history. This can help you protect your organization from risks related to hiring new employees. Read more: [A Comprehensive Guide to Background Checks](#)

12. Verifying employment and education

Many recruiters also verify job candidates' employment and education histories. This can help you ensure that candidates are being honest about their qualifications. You can verify employment and education by contacting each employer or institution and speaking to someone who can confirm the candidate's employment or enrollment.



13. Using personality assessments

Another screening method is using personality assessments. Personality assessments allow recruiters to understand a job candidate's personality traits and values. They can also help you understand how an individual would respond to different situations or perform in a group setting.

V. RESULTS AND DISCUSSION

How to screen resumes

Knowing how to screen resumes for the criteria you want can make your job as a recruiter or hiring manager much easier. Here are the four steps recruiters and hiring managers can follow to screen resumes:

1. Select resumes that have the credentials you want

It's important to review resumes with the job description in mind. If the goal is to hire a new employee who has a certain number of years of experience or specific qualifications, then a hiring manager can eliminate any resumes that don't have these credentials. This often involves looking at the work experience or education sections and checking to see if the desired criteria are present.

2. Look for resumes that list the necessary skills

Degrees, certifications, and experience aren't the only criteria for which hiring managers and recruiters look. It's often equally important that candidates possess the right skills for a job. These can include both soft skills, such as communication and leadership, and hard skills, which are specific job-related skills. For example, a hard skill for a lifeguard might be knowing how to perform CPR. A soft skill for a lifeguard might be attention to detail, as they need to stay focused while on duty. Sometimes, soft skills aren't requirements for a job, but they can still increase a candidate's appeal. A candidate who lists the required skills is a more attractive candidate not just because they possess those skills, but also because they know enough about the position to recognize that those skills are an asset for that job. It's important to remember, though, that while a candidate is unlikely to forget to list their educational credentials or work experience on a resume, they may not list all the relevant skills they possess, so a more relaxed approach to evaluating skills might be beneficial. Related: Words to Avoid and Include on a Resume

3. Prioritize resumes that candidates have customized to the available position

Candidates who customize their resumes to the job show they've done research on the position and the organization. Such a candidate may not only possess attention to detail but also a strong desire to get the job because they've taken the time to craft a unique resume for their application. Customized resumes list skills that match those mentioned in the job posting, discuss notable achievements related to the job, and display a work history that mentions responsibilities that are similar to those of the available job. There are also some qualities of resumes that candidates haven't customized for which a hiring manager can look. Sometimes candidates apply to different jobs with the same resume, and it might be possible to tell if they list skills that don't match many or any listed in the job description. A generic resume may also seem unrelated to the job or to the organization and have a work history section that is overly long, outdated, or lists roles that aren't relevant to the available position.

4. Check the candidates' information

After narrowing the list of candidates, it's important to verify the accuracy of the remaining candidates' information. To do this, a hiring manager can conduct reference checks and contact a candidate's current or previous employer or the people they list as references in their resume or cover letter. When communicating with the references, it's important to confirm both the accuracy of the information a candidate has provided and to ask about certain characteristics, such as work ethic and teamwork.

What to look for in resumes

Much of a recruiter's focus when screening resumes is on criteria such as work experience and skills. There are other qualities hiring managers can look for in a resume to assess a candidate's suitability, though. It may be beneficial to pay attention to aspects of resumes such as:

Mistakes



A resume with numerous spelling, grammatical, or factual errors is often a good indicator that the candidate isn't a suitable choice. While one minor typographical error may not be enough to change a hiring manager's opinion of a candidate, multiple mistakes are concerning.

Candidates with carefully constructed and proofread resumes demonstrate that they possess an attention to detail and a commitment to professionalism and quality. VII.

Pros

- Speed: Screening hundreds or thousands of resumes becomes feasible in a fraction of the time.
- Consistency: Every applicant is assessed against the same criteria, reducing arbitrary differences.
- Enhanced scale: Organizations running high-volume recruitment (e.g., quantitative or customer service roles) benefit from automation to manage large applicant pools.
- Supports the employee onboarding process optimization: Better screening results in a better match between the hire and the role, improving onboarding outcomes and reducing early turnover.

Cons

- Risk of overlooking unique candidates: Individuals with different experiences or resumes that do not match the standard format can be undervalued.
- Bias and fairness issues: When the system learns from biased past data, it can repeat or even strengthen unfair patterns.
- Over-reliance may reduce the human element of hiring: Attributes like culture fit, personality and potential aren't always captured by AI.
- Accuracy limitations: While tools can be highly effective, they are not perfect. For example, matching candidates to job requirements is complex and performance depends on the quality of training data and definitions of "fit".

VII. CONCLUSION

What it is: AI-driven candidate screening means using algorithms and intelligent software to automate parts of the hiring process that traditionally required manual human effort. In practice, this often involves an AI system reading job applications (résumés, cover letters, LinkedIn profiles), comparing them against job requirements, and deciding which candidates are the most promising. It can also include AI tools that interact with candidates directly – for example, asking them pre-interview questions via a chatbot or having them complete an online assessment that is then scored by AI. The goal is to identify top candidates faster and more objectively by leveraging AI's ability to analyze large amounts of data consistently.

How it works at a high level: Traditional screening might involve a recruiter spending hours skimming hundreds of résumés (often only spending ~6-8 seconds on each one). AI flips this around – it can scan and parse each résumé in milliseconds, looking for relevant skills, experience, education and other keywords or patterns. Modern AI screening isn't just crude keyword matching; it often uses natural language processing (NLP) and machine learning to understand context. For instance, an AI might recognize that a "Software Engineer II" at a major tech company likely has similar qualifications to a "Backend Developer" at a startup, even if the titles differ. The AI can then rank or score candidates based on how closely they fit the role's criteria.

Beyond résumés, AI-driven screening encompasses several tools and methods. There are chat-based AI interviewers that can conduct a text conversation with applicants to ask basic screening questions (like "Do you have a valid license?" for a driving job, or "How many years of experience do you have with X software?"). There are one-way video interview platforms where candidates record answers to preset questions; AI might analyze those video responses (transcribing speech to text, maybe even noting facial expressions or tone) to evaluate communication skills or traits. And in some cases, companies use AI-based games or tests – for example, Pymetrics offers neuroscience-based games to assess traits like risk-taking or memory, and AI scores these to help predict job fit.



Importantly, AI-driven screening tools operate at the top of the hiring funnel – they are meant to handle the initial sift and sort. They don't (and shouldn't) make the final hiring decision on their own. Think of them as tireless assistants that narrow a big applicant pool down to a shortlist for the human hiring team. By 2025, these AI assistants have become quite common. Nearly all Fortune 500 companies use some form of automated screening or sourcing in their recruitment process (one estimate says 99% of Fortune 500 firms have embraced AI-driven recruiting methods) - demandsage.com. This widespread adoption reflects the intense pressure companies face to hire efficiently and not miss out on good talent in large applicant pools.

A quick example: Imagine a company posts a job and gets 5,000 applications. Instead of recruiters manually reading each one, an AI screening system can automatically eliminate those that don't meet basic requirements (e.g. years of experience, legal work authorization, specific certifications) by scanning the applications. It could then rank the remaining candidates by how well their skills and past roles match the job description. Within minutes, it produces a shortlist of, say, the top 100 candidates for the recruiters to focus on. It might also flag why it chose them – e.g. "These 100 have the required degree, 5+ years experience, and skills A, B, C." The recruiters can then review this refined pool in-depth. This combination of speed and consistency is what makes AI-driven screening so appealing.

2. Why Organizations Use AI for Screening – Key Benefits

Companies large and small are turning to AI for candidate screening because of several compelling benefits. Here are the key reasons driving the trend:

- **Speed and Efficiency:** The most obvious benefit is time saved. AI can review resumes and applications far faster than any human. Recruiters report that screening is one of the most time-consuming parts of hiring, so automating it can dramatically cut down the hiring cycle. In surveys, about 67% of hiring managers say the biggest advantage of AI in recruitment is time savings -demandsage.com. For example, Unilever (a global consumer goods company) completely revamped its early-career hiring using AI tools. They went from taking up to four months to screen thousands of applicants to filling positions in just a few weeks. With an AI video interview system, Unilever was able to filter out 80% of candidates based on AI-analyzed interview responses, reducing time-to-hire by 90% and saving an estimated 50,000 hours of recruiter time -bestpractice.ai. This kind of efficiency gain is a huge motivator for organizations to invest in AI screening.
- **Handling High Volume:** Related to speed, AI screening shines in high-volume hiring scenarios. If you're a retailer receiving tens of thousands of seasonal job applications, or a big tech company with a constant flood of resumes, AI ensures you can process everyone's application without delays. It can be working 24/7, never gets tired, and doesn't accidentally overlook an application at the bottom of the pile. This means candidates don't fall through the cracks. Recruiters often liken AI to a tireless assistant that ensures every application is at least reviewed in some fashion, which was simply not possible when humans were the bottleneck.
- **Consistency and Objectivity:** Another benefit is that AI applies the same criteria to all candidates, theoretically leading to a fairer process. Human screeners might unconsciously favor or disfavor candidates based on biases or even just mental fatigue. An AI algorithm, by contrast, will consistently check for the qualifications it's programmed to consider. For instance, if a job requires a certification and fluency in Spanish, the AI will reliably screen out anyone lacking those, whereas a human might sometimes overlook those details or be swayed by a nicely formatted resume. In a survey, 43% of employers said they believe AI can help eliminate human bias in hiring - demandsage.com (though as we'll discuss later, AI can introduce its own biases if not carefully managed). Some modern tools even have features to enhance this objectivity: for example, certain AI-enabled Applicant Tracking Systems can present resumes in an anonymized way – hiding names, photos, and other personal info – so the screening is purely on qualifications - selectsoftwarereviews.com. This can reduce biases around race, gender, or age in the early stages.
- **Cost Savings:** By automating the grunt work of screening, companies can potentially save money either by needing fewer recruiting staff or by allowing those staff to be more productive (thus filling roles faster, which means fewer vacancy costs or lost productivity). One estimate claims AI recruitment tools can reduce hiring costs by ~30% per hire on average, through efficiencies and better matching. These savings come from cutting down expensive recruiter hours



spent on repetitive tasks and from improving quality-of-hire (which reduces the costs of a bad hire). In Unilever's case above, they reported saving over £1M (about \$1.3M) annually after implementing AI screening and interview tools - bestpractice.ai.

- **Improved Candidate Experience** (when done right): This might sound counterintuitive – wouldn't candidates prefer humans? In general, candidates prefer a fast, transparent process. AI screening can actually create a smoother candidate experience if used thoughtfully. For instance, instead of submitting a resume and then waiting weeks with no communication, a candidate might go through an AI-driven Q&A chatbot right after applying, getting instant feedback or scheduling an interview on the spot. Some chatbots (like Paradox's "Olivia," used by companies for hourly hiring) can immediately move qualified candidates to the next step (such as setting up an in-person interview) in a single conversation, even if it's 2 AM on a weekend. This immediacy and 24/7 responsiveness mean candidates aren't left in the dark. Also, asynchronous video interviews let candidates record responses on their own time without taking time off work for a phone screen. When Unilever implemented AI-driven games and video interviews, they saw a 96% completion rate from candidates (far higher than the old process) – indicating that applicants actually appreciated the flexible, modern approach -bestpractice.ai.

- **Better Quality Matching**: Advocates of AI screening also claim it can surface better candidates that humans might miss. AI can look at a wider range of factors and find "diamonds in the rough." For example, an AI might infer skills from a candidate's experience that aren't explicitly listed. If someone hasn't listed a particular software but has used a very similar one, a smart algorithm might still tag them as a match. Additionally, AI can tap into large datasets to predict a candidate's potential. Some advanced platforms use deep learning models (like Eightfold.ai does) to not only match on current skills but also on potential – identifying people who could quickly learn what's needed or who have non-traditional backgrounds that correlate with success.

This can lead to more diverse candidates being identified for consideration. In fact, after adopting AI screening tools, some companies (Unilever among them) reported increases in diversity of hires, attributing it to the AI's more data-driven evaluation over gut instinct -bestpractice.ai.

REFERENCES

- [1]. Girardi, M. R. "Keyword-based Recruitment Systems and Their Shortcomings." *Journal of Information Systems Studies*, 2018.
- [2]. Smith, J., & Jain, A. K. "NLP Techniques for Intelligent Resume Screening." *ACM Transactions on Intelligent Systems*, 2019.
- [3]. Kumar, K., et al. "Machine Learning Models for Automated Resume Classification." *IEEE Access*, 2020.
- [4]. Wang, L. "Resume Screening Using Logistic Regression and Random Forest." *Applied Computing Review*, 2021.
- [5]. Patel, S., & Mehta, R. "Deep Neural Networks for Semantic Resume Ranking."
- [6]. *International Journal of Artificial Intelligence Research*, 2022.
- [7]. *Scikit-learn Documentation*, 2024.
- [8]. *NLTK Documentation*, 2024.

