

MINI PROJECT ;

RESUME SCREENING

INTRODUCTION

Resume screening is a critical first step in the hiring process, allowing recruiters to efficiently filter large volumes of applications and identify candidates who best match the job requirements. It saves time and resources by focusing attention on the most qualified applicants, ensures alignment between the candidate's skills and the role, and improves the overall quality of hires. When done systematically, resume screening also promotes fairness and reduces bias, making it essential for effective and efficient recruitment.

TYPES OF PROMPTS THAT EXPLORED HERE:

zero shot prompting.

fewshot prompting

role prompting

chain of thought prompting

PROMPT 1 (ZERO- SHOT PROMPTING)

what do you mean by resume screening?

OUT PUT 1

Resume screening is the process of reviewing job applicants' resumes to determine whether they meet the required qualifications and criteria for a specific job role. It's typically the first step in the hiring process and helps recruiters or hiring managers filter out unqualified candidates before moving to interviews.

 Purpose of Resume Screening: To identify suitable candidates for a job.

To shortlist resumes that match job descriptions.

To eliminate unqualified applicants.

 Methods of Resume Screening:

Manual Screening

Human recruiter reads and evaluates each resume.

Time-consuming but may be more context-aware.

Automated Screening (ATS - Applicant Tracking System)

Software filters resumes based on keywords and criteria.

Fast and efficient, but can miss good candidates due to formatting or wording.

AI-Powered Screening

Uses machine learning/NLP to evaluate resumes more contextually.

May analyze tone, intent, skill patterns, etc.

Challenges in Resume Screening:

Bias (manual or algorithmic)

False negatives (qualified resumes filtered out)

Overreliance on keywords

Large volume of applicants for a single role

PROMPT 2

(CHAIN OF THOUGHT PROMPTING)

"How does the candidate's work history align with the job responsibilities? Provide specific examples from the resume input:candidate resume

OUT PUT 2

Based on the resume image you've provided, the Work History section is only outlined as a placeholder, and not filled with specific details. Therefore, it's not possible to evaluate how the candidate's work history aligns with any job responsibilities at this stage.

Here's what the resume currently includes: The section "WORK HISTORY" is listed along with related headings such as:

ENGINEERING EXPERIENCE

COMPUTER PROGRAMMING EXPERIENCE

ACCOUNTING EXPERIENCE

etc.

But these are only section titles, not actual job roles, companies, dates, or achievements.

What's Missing for Alignment Analysis: To determine alignment with a job's responsibilities, a resume should contain:

Required Example Job Titles Software Intern, Lab Assistant Company Names ABC Corp, Tech University Lab Dates May 2023 – Aug 2023 Key Responsibilities/Actions Developed Python scripts for data analysis; Designed web pages using HTML/CSS Outcomes Reduced error rate by 20%; Improved UX on student portal

✅ Suggestions: To make this resume effective for screening:

Fill in the job titles and companies under "Work History" or "Field Related Experience".

Add 2–3 bullet points per job describing what the candidate did, focusing on skills relevant to the job they're applying for.

Quantify results (e.g., "Improved system performance by 30%").

Would you like help filling in those sections based on a sample job description or field (e.g., Software Engineering, Data Analysis)?

PROMPT 3

(ROLE PROMPTING)

As an HR professional at a renowned company specializing in web development and web design, I've developed a set of *10 to 15 question criteria* to screen resumes effectively for upcoming roles. These criteria are designed to identify top candidates by evaluating their technical skills, practical experience, and alignment with our company's culture and needs. Below is the comprehensive list of questions to guide the resume screening process:

OUTPUT 3


Here's a comprehensive list of 10 to 15 effective resume screening questions tailored for an HR professional in a web development and web design company. These questions are designed to evaluate candidates' technical expertise, hands-on experience, design sensibility, and cultural fit:

🔧 **Technical Skills & Expertise** Does the candidate demonstrate proficiency in core web technologies (HTML, CSS, JavaScript)? Look for project examples, portfolios, or job roles involving these technologies.

Has the candidate worked with modern front-end frameworks (e.g., React, Vue.js, Angular)? Evaluate how deeply they've used these tools in past roles.


Is there evidence of responsive web design knowledge and mobile-first development? Check for mentions of cross-device compatibility and framework usage like Bootstrap or Tailwind CSS.

Has the candidate used version control systems such as Git in collaborative settings? Team-based projects or GitHub links can be strong indicators.

 **Design Understanding & Aesthetics** Does the resume reflect experience with UI/UX design principles or tools (Figma, Adobe XD, Sketch)? Review if they've participated in wireframing, prototyping, or user testing.


Is there any mention of accessibility standards (WCAG) or inclusive design? Check for awareness or implementation of accessible web practices.

Are there examples of working alongside or as part of design teams? Look for collaboration with designers or full-stack roles involving both design and development.

 **Work Experience & Project Contributions** Has the candidate contributed to live or production-ready websites or web apps? Portfolio links or measurable outcomes (e.g., performance boosts, SEO gains) matter.


Is there evidence of solving real-world problems or optimizing workflows (e.g., automation, CMS integration)? Example: "Reduced page load time by 30% through code optimization."

Are the roles and responsibilities aligned with the job requirements in your company? Match keywords in your job description with the resume's listed duties.

 **Soft Skills & Cultural Fit** Does the candidate show adaptability, career growth, or learning mindset? Note any upskilling (bootcamps, courses, certifications) or career transitions.

Are there indications of strong communication or team collaboration skills? Roles involving client interaction, Agile/Scrum teams, or documentation writing are good signs.

Has the candidate participated in open-source, hackathons, or community-driven tech activities? Shows passion and engagement beyond just a job.

 **Company Alignment & Unique Value** Does the candidate express or imply interest in your industry domain or company values? Check the summary/objective section or cover letter.

What unique skills, tools, or perspectives does this candidate bring that could benefit your projects? For example: animation libraries, motion design, SEO optimization, or AI integration in UI.

Would you like a screening checklist template or rubric based on these questions to make your screening process even smoother?

PROMPT 4

(CHAIN OF THOUGHT PROMPTING)

Is there strong technical proficiency in core web technologies?

OUTPUT4

ChatGPT said: Great! Here's how you can expand and structure the question:

✓ Is there strong technical proficiency in core web technologies? What to look for in the resume:

Clear mention of HTML5, CSS3, and JavaScript in the skills or experience section.

Examples of hands-on projects or job roles that required regular use of these technologies.

Portfolio links or GitHub repositories showcasing static or dynamic web pages.

Use of semantic HTML, media queries, CSS preprocessors (like SASS/LESS), or modern JavaScript ES6+.

Follow-up evaluation questions:

Has the candidate built responsive websites using these technologies?

Are their web development experiences recent and relevant?

Is there a clear demonstration of clean code practices (modular CSS, reusable JS functions)?

Did they work on performance optimization using core tech (lazy loading, DOM manipulation, etc.)?

Would you like me to break down and reformat all 15 questions in this expanded format for use in an evaluation form or rubric?

PROMPT 5

(FEW- SHOT PROMPTING)

Is there evidence of solving real-world problems or optimizing workflows (e.g., automation, CMS integration)?

OUTOUT 5

ChatGPT said: Based on the resume image you provided, there is no explicit evidence of solving real-world problems or optimizing workflows, such as automation, CMS integration, or similar tasks. Here's the analysis:

🔍 What the Resume Shows: The "FIELD RELATED EXPERIENCE" section includes:

Michigan Tech University Enterprise Program – SAE Aerospace Team Project:

Objective

Action

Action

But these are generic placeholders with no actual descriptions of tasks or outcomes.

✗ Missing Indicators of Real-World Problem Solving: To demonstrate real-world impact or optimization, the resume should include phrases like:

"Automated data entry process using Python, reducing manual effort by 40%"

"Integrated WordPress CMS for easier content management"

"Redesigned workflow to reduce project turnaround time by 25%"

"Developed real-time monitoring system for aerospace components"

✅ Suggestions to Add Evidence: Encourage the candidate to:

Describe real projects they worked on in detail.

Highlight how their work:

Improved efficiency

Reduced errors

Saved time/cost

Helped users or systems work better

Use metrics or measurable outcomes where possible.

Would you like a rewritten version of this section that includes strong examples of real-world problem solving? I can create a sample for a field like software development, engineering, or any area you choose.

PROMPT 6

(FEW- SHOT PROMPTING)

Are there examples of working alongside or as part of design teams?

OUTPUT 6

ChatGPT said: Based on the resume image you provided, there is no clear or explicit example of working alongside or as part of design teams.



What the Resume Includes: CO-OP or INTERNSHIP EXPERIENCE: Contains only a template structure:

Name of Company Job Title ▪ Action ▪ Action

FIELD RELATED EXPERIENCE:

Michigan Tech University Enterprise Program – SAE Aerospace Team

Project:

Objective

Action

Action

Although the phrase "Enterprise Program – SAE Aerospace Team" implies team-based work, it does not specify design team involvement, roles, or collaboration activities.

✗ What's Missing: No examples such as:

"Collaborated with UI/UX designers to build a responsive front-end"

"Worked with a product design team on aerospace component layout"

"Participated in Agile sprints alongside designers and engineers"

✓ Suggestions to Add This: To show design team collaboration, the candidate could include bullets like:

"Worked with a cross-functional team including engineers and designers to develop a prototype"

"Contributed to CAD designs for mechanical components as part of the product development team"

"Assisted UX team by providing technical feedback on interface design"

Would you like a sample bullet point or project summary that demonstrates collaboration with a design team, customized for a specific industry (e.g., software, engineering, marketing)?

PROMPT 7

(CHAIN OF THOUGHT PROMPTING)

Are there indications of strong communication or team collaboration skills?

OUTPUT 7

From the resume image you provided, there are no explicit or detailed indications of strong communication or team collaboration skills — only indirect hints.

🔍 Possible Implicit Clue: The mention of:

"Michigan Tech University Enterprise Program – SAE Aerospace Team"

This implies team-based involvement, since SAE projects typically require collaboration. However, the resume does not elaborate on communication roles, such as:

Leading meetings

Coordinating across teams

Presenting work

Writing reports

✗ What's Missing: There are no bullet points or descriptive content like:

"Communicated technical concepts to non-technical stakeholders"

"Led weekly meetings to align team progress"

“Documented project findings and presented to faculty panel”

“Collaborated with a team of 5 to meet design milestones”

✅ How to Show Strong Communication & Collaboration: To clearly demonstrate these soft skills, the candidate should:

Include action verbs: collaborated, coordinated, presented, facilitated, communicated.

Specify context: with whom, how often, and the purpose.

Mention outcomes: what the communication or collaboration achieved.

🔧 Sample Revision: Original:

Project: ▪ Objective ▪ Action ▪ Action

Improved:

Collaborated with a 6-member aerospace design team to build a prototype glider

Presented project findings during departmental symposium with 50+ attendees

Documented progress reports for faculty and industry mentors

Would you like me to help rewrite the "Field Related Experience" section to clearly highlight communication and teamwork skills?

MINI PROJECT REPORT

Domain: Resume Screening

Explored Prompt Types:

- Zero-Shot prompting
- Few-Shot prompting
- Role Prompting
- Chain-of-Thought Prompting

REPORT :

Introduction

Resume screening plays a foundational role in recruitment, allowing hiring teams to filter candidates effectively. With the rise of AI and language models like ChatGPT, prompt engineering has become a powerful technique to automate and enhance this screening process. This project explores four types of prompting—Zero-Shot, Few-Shot, Role Prompting, and Chain-of-Thought (CoT) Prompting—and evaluates their effectiveness in extracting

meaningful insights from resumes. The project also addresses ethical dimensions including bias, misinformation, safety concerns, and the responsible use of prompting.

Prompt Types Explored and Analysis

- **Zero-Shot Prompting** was used for general inquiries such as “What is resume screening?”. This produced clear and informative definitions, covering the purpose, methods (manual, ATS, AI), and challenges (bias, false negatives). However, while useful for basic understanding, zero-shot responses lacked nuance and context-awareness.
- **Few-Shot Prompting** improved specificity. For example, providing a set of structured questions (Prompt 3) generated a detailed rubric for screening resumes in a web development company. The model identified key technical skills, project-based experience, and indicators of cultural fit. This prompt style helped simulate expert reasoning and offered valuable screening criteria, but its effectiveness relied on carefully crafted input examples.
- **role Prompting** further contextualized the model’s response. By assigning the role of an HR professional, the model adopted a tone and approach consistent with recruitment best practices. It evaluated resumes not only for technical qualifications but also for soft skills and design team collaboration—important traits for interdisciplinary tech roles.
- **Chain-of-Thought Prompting** asked the model to reason step-by-step. For instance, in Prompt 2, evaluating alignment between a resume and job responsibilities, the model was able to break down what information was missing (job titles, dates, actions) and suggest improvements. This made CoT prompting ideal for incomplete resumes or ambiguous information.

Bias in Language Models

Bias remains a significant concern when using AI in hiring. Language models can unintentionally reflect historical patterns of discrimination present in the training data. For example, they may over-prioritize candidates with specific educational backgrounds, work formats, or language styles that are statistically more common in certain regions or demographics.

In the prompts used, care was taken to neutralize such bias by focusing on skills, outcomes, and collaboration examples rather than personal details or formatting. However, the risk of implicit bias still exists, particularly if prompts are vague or overly dependent on keyword matching, which can unfairly penalize candidates who describe their experience differently.

Limitations of Prompting and Models

Despite their capabilities, LLMs come with notable limitations:

- **Contextual Misunderstanding:** If resume inputs are vague, templated, or incomplete, the model can make assumptions or offer irrelevant suggestions.
- **Data Fabrication:** Without explicit safeguards, the model may generate hypothetical job experiences or outcomes that were not provided in the input.
- **Lack of Domain Precision:** While general advice is accurate, domain-specific screening (e.g., aerospace vs. marketing) may require more precise tuning or curated data.
- **Dependence on Input Quality:** The effectiveness of output is closely tied to the clarity and completeness of the input. For instance, placeholder resume sections led to generalized feedback rather than personalized insights.

Reliability of Prompted Outputs

In terms of reliability, the outputs showed strong consistency when prompts were clear, structured, and context-aware. Role prompting and few-shot prompting offered the most reliable responses for resume evaluation, especially when analyzing experience alignment or technical proficiency.

However, zero-shot prompts were less dependable for complex analysis. Chain-of-thought prompting enhanced reliability by encouraging step-by-step justification, helping users trace the reasoning process behind an evaluation.

To ensure higher reliability:

Prompts should specify the resume format or domain. Evaluation questions should be grounded in role-specific expectations. The model's outputs should always be reviewed by human recruiters to confirm relevance and fairness.

Conclusion

This mini project successfully demonstrated how different types of prompting can transform the resume screening process by making it more structured, fair, and insightful. However, it also highlighted the need for ethical safeguards when using AI in hiring. By refining prompts and remaining aware of bias, misinformation, and safety concerns, prompt engineering can become a responsible and powerful tool in modern HR practices.
