

Prompt Engineering Documentation

This report focuses on the prompts utilized throughout this assignment to gain useful insights on the provided dataset.

Dataset Description

The dataset contains emotion scores, transcript scores and corresponding transcripts extracted from the introduction videos of 10 candidates applying for a job.

- Emotion scores: The dataset contains the emotions of candidates throughout the video including emotion scores of angry, happy, sad, disgust, fear, surprise and neutral, gaze, eye offset, blink and the metadata of the image frames extracted from the video.
- Transcript scores: The dataset contains positive, negative, neutral, confident, hesitant, concise, enthusiastic scores obtained after sentiment analysis on the transcripts of each candidate.
- Transcript text: Contains the actual text of the transcript of the videos of each candidate.

Objectives

- Perform prompt engineering and Exploratory Data Analysis on the given dataset to generate valuable and actionable insights from the data.
- Analysis of communication skills and finding areas of expertise based on data.
- Gain any other insights that could be useful in making a decision on the recruitment of the candidate.
- Decide whether the candidate should be recruited or not after a thorough analysis of the data.

Prompt Engineering

Prompt engineering was used only to learn more about the *transcript text* dataset. Exploratory data analysis was done on *emotion scores* and *transcript scores* dataset using Python.

I used prompt engineering for the following tasks:

1. Generating essential details about each candidate including their names, educational backgrounds, work experience and relevant skills and store it in a format (SQL table) that could be useful later.
2. Judging the language proficiency of the candidates based on their transcripts and categorize the proficiency out of great, good, satisfactory, bad, and very bad.
3. Finding the area of expertise of each candidate and generating insights and observations on each candidate that could be useful in the recruiting process.
4. Match the candidates with potential departments where their skills and experiences could be valuable.

GPT-3.5 was used for prompt engineering.

I used four different prompts to achieve these tasks. The prompts are discussed in the following pages.

Prompt 1

Prompt

This prompt is documented in *prompt.txt* file. The prompt is too big and would be easier to read if it stored in a separate file.

The prompt has the transcripts of all the candidates arranged numerically and asks ChatGPT to read these transcripts and extract the essential details of each candidate such as candidate name, education, work experience, relevant skills, and any other important details. Additionally, it asks ChatGPT to judge the language proficiency of each candidate keeping in mind factors like vocabulary, flow of thoughts, and grammar and then categorize the proficiency out of great, good, satisfactory, bad, very bad. Finally, the prompt tells ChatGPT to create a csv file containing the candidate's name, education, work experience, relevant skills, other details, language proficiency of each candidate.

This prompt is generated using Python in *generate_prompt.py*. This is done so that adding each transcript to the prompt numerically can be automated instead of doing it manually.

Response

In response, ChatGPT generated an csv format text that contains candidate name, education, work experience, relevant skills, other details, and language proficiency. This csv file is saved in *candidate_info.sql* in *candidate_details* directory.

Prompt 2

Prompt

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Now that you know all the candidates, can you give some insights about these candidates specifically which would be useful in the recruiting process

Response

Certainly! Based on the provided video resume transcripts, here are some insights and observations about each candidate that could be useful in the recruiting process:

1. Jeffrey Shepherd:

- Strong educational background with postgraduate studies at IIM Coimbatore and previous degrees in Biotechnology.
- Significant experience in the regulatory affairs domain of the pharmaceutical industry and as a medical writer.
- Exhibits attention to detail, consistency in academics, and an analytical mindset.
- Passionate about baking, experimenting with recipes, and traveling.
- Demonstrates a proactive approach to problem-solving and viewing challenges from multiple angles.

2. Cameron Barajas:

- Recent BBA graduate with a flexible attitude and adaptability to both lead and collaborate within a team.
- Experience in the finance domain through internships, showcasing an interest in venture networks and financial modelling.
- Expresses a passion for challenges and a desire to grow at an accelerated rate within a challenging role.

3. Michael Guzman:

- Impressive academic performance, securing a top rank in undergraduate entrance exams and pursuing honours.
- Exhibits a diverse skill set including sales, accounting, and guitar playing, demonstrating adaptability and versatility.
- Passionate about music, evidenced by being an excellent guitar player and running a YouTube channel dedicated to music.

4. Monique McCormick:

- Engineering graduate with a focus on electronics and communication, showcasing a technical foundation.
- Experience in VLSI design and academic advising, indicating skills in technical analysis and mentorship.
- Enjoys sports like badminton and chess, highlighting a well-rounded personality and an interest in physical activities.

5. Sakshi:

- Background in mass media and advertising, complemented by certifications and an entrepreneurial mindset.
- Proven creativity and achievement in art, winning an international art competition, and sharing movie reviews on a personal platform.
- Passionate about raising awareness for mental health issues, with innovative ideas integrating AI and education.

6. Nathan Lewis:

- Engineering background with relevant consulting experience, showing a transition towards analytics and strategy in MBA.
- Skilled in analytics and social media management, showcasing a tech-savvy approach.
- Strong communication skills and a passion for understanding people and their needs.

7. Joseph Nichols:

- Background in earth science and experience in reinsurance underwriting, showcasing analytical skills and industry understanding.

- Eager for new experiences and values uniqueness in individuals, aligning with the company's ethos.

8. Srivats Biyani:

- Chartered Accountant with experience in PWC and ITC, bringing financial acumen to an MBA program.
- Analytical and numbers-oriented mindset, keen on applying data analysis tools.
- Enthusiastic about the edtech space and motivated to expand successful models to India.

9. Alexander Smith:

- Engineering and technology background with a strong focus on agriculture and agritech, showcasing a niche expertise.
- Entrepreneurial mindset with experience in co-founding an agritech startup and leading technology-based agricultural projects.
- Passionate about AI and its potential for societal development.

10. Michael Ramos:

- Commerce graduate with internships in accounting and tax analysis, demonstrating financial understanding and analytical skills.
- Leadership experience in student committees and social activities, indicating good interpersonal and organizational skills.
- Driven by the desire to apply knowledge in real-world scenarios and create long-term value.

These insights provide a glimpse into the candidates' educational background, experiences, skills, and passions, which are valuable considerations for the recruiting process. Tailoring interview questions and assessments based on these insights can help in evaluating the candidates more effectively.

Prompt 3

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Now that you know all the candidates, can you give some insights on which candidates would be useful in different departments in a company including but not restricted to tech, hr, law, management, sales, etc

Response

Certainly! Based on the provided information, let's match the candidates with potential departments where their skills and experiences could be valuable:

1. Technology/IT Department:

- **Candidates:** Jeffrey Shepherd, Sakshi
- **Reasoning:**
 - Jeffrey has a strong background in biotechnology and experience in the pharmaceutical industry. His expertise could be valuable in a technology-driven healthcare or pharmaceutical company.
 - Sakshi has a background in mass media with a specialization in advertising. Given her interest in AI to analyze and improve educational strategies, she could contribute to technology-focused projects in the education or edtech sector.

2. Human Resources (HR) Department:

- **Candidates:** Cameron Barajas, Joseph Nichols
- **Reasoning:**
 - Cameron has demonstrated flexibility, teamwork, and adaptability, making him a suitable fit for HR roles that require good team dynamics and adaptability in a dynamic work environment.
 - Joseph has experience in underwriting departments and strong analytical skills. He could potentially excel in roles related to talent analytics or HR data analysis.

3. Law/Legal Department:

- **Candidate:** Srivats Biyani
- **Reasoning:**
 - Srivats is a chartered accountant with experience in internal audit. His analytical skills and legal exposure make him potentially suitable for roles related to compliance, legal advisory, or corporate law.

4. Management/Strategy Department:

- **Candidates:** Monique McCormick, Nathan Lewis
- **Reasoning:**
 - Monique has a background in electronics and communication engineering, along with experience in academic advising and leadership roles. She could be an asset in project management and strategic planning roles.
 - Nathan, being an MBA analytics student with consulting experience, can contribute to strategy development, analytics-driven decision-making, and planning.

5. Sales/Business Development Department:

- **Candidates:** Michael Guzman, Michael Ramos
- **Reasoning:**
 - Michael Guzman has experience as a sales associate and a passion for entrepreneurship. His background and interests align with roles in sales, business development, or account management.
 - Michael Ramos has interned as an Accounting and Tax Associate, demonstrating financial acumen which could be valuable in sales or business development involving financial services/products.

These potential matches are based on the information provided in the video resumes and may vary based on additional qualifications, interview performance, and specific roles within each department. It's essential to conduct further interviews and assessments to determine the best fit for each candidate and department.

Prompt 4

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are there any other company departments where some of the candidates could be useful

Response

Certainly! Here are some additional company departments where the candidates could potentially be useful based on their skills, experiences, and interests:

6. Marketing Department:

- **Candidates:** Sakshi
- **Reasoning:**
 - Sakshi, with a background in mass media and specialization in advertising, as well as her passion for spreading awareness about mental health, could be a valuable addition to the marketing team. Her creative thinking and writing skills could contribute to effective marketing campaigns and strategies.

7. Product Development/Innovation Department:

- **Candidates:** Jeffrey Shepherd
- **Reasoning:**
 - Jeffrey's background in biotechnology and pharmaceutical industry experience, along with his passion for experimenting and attention to detail, could make him a valuable contributor to product development or innovation initiatives within a biotech or pharmaceutical company.

8. Customer Service/Support Department:

- **Candidates:** Cameron Barajas, Michael Guzman
- **Reasoning:**
 - Cameron's flexible attitude, passion for giving his best, and experience in dealing with startups could translate well into customer service roles, where adaptability and client-focused approaches are crucial.
 - Michael Guzman's adaptive and inquisitive learning style, along with his internship experience and desire to apply his knowledge, make him a potential fit for customer support or client relations roles.

9. Finance and Accounting Department:

- **Candidates:** Monique McCormick, Srivats Biyani, Michael Ramos
- **Reasoning:**
 - Monique, with her engineering background and internship experience, could potentially transition into roles involving financial analysis, budgeting, or financial planning within the finance and accounting department.
 - Srivats, being a chartered accountant and having experience in internal audit, is well-suited for roles in financial analysis, internal control, or accounting within the finance department.
 - Michael Ramos, with his B.Com Honours and internships in accounting and tax, could contribute effectively in roles related to financial analysis, accounting, or tax compliance.

10. Research and Development (R&D) Department:

- **Candidates:** Jeffrey Shepherd, Monique McCormick
- **Reasoning:**
 - Jeffrey's strong background in biotechnology and pharmaceutical industry experience makes him a potential candidate for research and development roles, particularly in the life sciences or healthcare sectors.
 - Monique, with her engineering background and experience in academic advising, could potentially contribute to research and development projects, especially in engineering or technology-driven R&D.

Assigning candidates to specific departments is a dynamic process that depends on various factors, including the specific roles available, organizational needs, candidate interests, and individual skills. Further evaluation, interviews, and discussions with the candidates would be essential to determine the best fit for each department.

Conclusion

In this study, we explored the application of ChatGPT in getting valuable insights from the data. The primary objective was to ensure that the transcripts were available in a easily readable format (here, csv format). The interaction with ChatGPT was facilitated through carefully designed prompts.

All our objectives for the prompt engineering task were completed using these four prompts. Prompt 1 was helpful in deducing essential information from the transcripts and presenting this information in a readable manner. Prompt 2 was used to get short and quick insights on each of the candidates that would be useful during hiring or interview process. Prompt 3 and Prompt 4 were essential in finding the areas of expertise of each candidate and matching these candidates with potential departments where their skills and experiences could be valuable.

It was observed that the prompts played a critical role in steering the responses generated by ChatGPT. The nuances in prompt phrasing and structure significantly influenced the relevance, coherence, and informativeness of the responses.