

Seeing the Job Interview from the Eyes of Students: The Sensory Professional in Brazil Collaborating with Mind Genomics and Artificial Intelligence

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ABSTRACT

The paper presents a synthesis of artificial intelligence and Mind Genomics to understand what students should be thinking about when they prepare for a corporate job interview in the field of sensory analysis. The integration of artificial intelligence with actual data from real people shows the power of using artificial intelligence to suggest ideas, of people who evaluate these ideas, of statistics, which uncover patterns, and then for straightforward interpretation and recommendation based upon artificial intelligence coupled with human understanding. The paper is one of the first of its kind to show a practical, simple approach, one that can be done in days at an affordable price for students and other interested parties.

Keywords

Artificial intelligence, Mind Genomics, Job interview, Sensory analysis, Students.

Abbreviations

AI: Artificial Intelligence, ChatGPT: Chat Generative Pre-Trained Transformer, LLM: Large Language Model, MRI: Magnetic Resonance Imaging, OLS: Ordinary Least Squares Regression.

Introduction

Today's competitive business world requires understanding consumer preferences to drive informed product decisions. In this effort, companies need sensory analysis. Quality and consumer attractiveness depend on a product's sensory qualities. This requires rigorous taste, smell, texture, and appearance evaluation. Companies must understand sensory preferences to avoid designing products that disappoint customers and lose money [1-3].

Sensory analysis is useful for understanding consumer behavior because it provides objective data about consumer preferences. Companies can learn about consumer preferences and dislikes of their products by conducting sensory tests with a varied group of volunteers. This information can inform product development, marketing, and business operations decisions. Sensory analysis helps organizations identify consumer preferences, and then tailor their products to stay competitive [4-7].

Sensory analysis has many benefits, but it took a long time to be acknowledged as a commercial tool. With the increased importance of sensory analysis, however, more and more firms are investing in sophisticated sensory testing procedures, and recruiting qualified individuals to perform them. The question is how to get these individuals "up to speed," so instead of the company looking at their salaries as a "cost," the companies instead look at these individuals as part of the "war chest," their "secret sauce," their competitive advantage [8-11].

From the Lecture Hall and Laboratory to a Job in the Real World: What Might the Budding “Sensory Analysis Professional” Be Thinking?

That new time in a young person’s life, from studying sensory analysis to preparing for business interviews, can be exciting but also nerve-wracking. The student studying sensory analysis undoubtedly knows or will surely know what to do to evaluate and analyze taste, smell, and texture. But is that all? Entering business requires a thorough understanding of consumer preferences and attitudes. This understanding can help negotiate the industry’s intricacies. How do we get the sensory student up to speed, to operate in the rough and tumble world of commerce after a life in an ivory tower, or at least after a life as a student?

Let us use artificial intelligence, specifically ChatGPT 3.5 [12], to simulate what might be going on in the mind of the student, and from there develop the experiment to tell us how they think. The process is “iterative.” Using AI to understand an opportunity does not automatically mean that there is no thinking required. The iteration moves the quest for information from the general to the particular.

The first set of italicized statements below come from the request to AI to provide information to a Brazilian graduate from the UNICAMP sensory analysis laboratory. Table 1 shows the output from AI, and the output is simple, readable, and general. The information generated by AI tends to be general, not particularly helpful, resembling what one would find in the many books and other sources of information about job-hunting.

Table 1: The output from AI regarding the request for general information about an interview.

Stressing your sensory analysis training can boost your job interview performance. It shows your attention to detail and judgment. Business employers want applicants with strong analytical skills and the capacity to make data-driven judgments. Your sensory analysis skills demonstrate your skill.

Additionally, your sensory analysis skills can set you apart in employment interviews. Having a deep grasp of sensory inputs and consumer preferences can boost your professional reputation and make you invaluable to companies.

Job interviews may ask you to demonstrate how your sensory analysis skills have prepared you for a business career. Prepare to share projects or experiences where you used sensory analysis to make informed decisions or solve problems. This might demonstrate your business readiness and relevant experience.

Studying sensory analysis to interviewing for a business position can be challenging yet rewarding. You can succeed in your job search and career by using your sensory analysis skills in a professional setting.

The next effort was to instruct the AI to enter the mind of the student in Brazil and think about what might be going on. The information in Table 2 shows a deeper probe into what the student might be thinking, but once again there is a sense of generality — a generality that will have to be ignored in the search for strong material to use in the interview.

The third and final “general” level of this effort focuses on the specific capabilities of AI, by providing AI with some ideas, such

as asking about the types of industries, and the role of sensory analysis. Once again, however, the AI ends up generating somewhat more targeted but still general statements, as shown in Table 3.

Table 2: What AI provides when instructed to go into the mind of the graduating sensory student in Brazil who is contemplating the interview for a job most likely early in one’s career.

As a sensory graduating student entering the business world in Brazil, my mind is filled with uncertainty and excitement. I am eager to apply the knowledge and skills I have acquired during my studies to real-world situations. However, I am also aware of the challenges that come with finding a job in a competitive market. I wonder if my education has prepared me enough to stand out among other job applicants. Will I be able to find a job that aligns with my interests and goals?

I am considering various industries and companies to apply to, but I am unsure about where to start. Should I focus on a specific sector that aligns with my field of study, or should I explore opportunities in different industries to expand my experience? Will I be able to secure a job with a reputable company that offers opportunities for growth and advancement? How can I leverage my unique skills and experiences to make a lasting impression on potential employers?

I am also thinking about the job market in Brazil and how it may impact my job search. What are the current trends in the business world in Brazil, and how can I position myself as an asset to companies in this competitive landscape? How can I network and build connections to increase my chances of landing a job? Am I prepared to take on the challenges and responsibilities that come with a career in the business world? How can I continue to develop professionally and stay relevant in an ever-evolving job market?

Table 3: AI generated suggestions to the students.

When students in sensory analysis in Brazil start the process of applying for jobs, they may consider the various job opportunities available in the field. One might be curious about the various industries that employ sensory professionals, including food and beverage companies, cosmetic companies, and research institutions. One option for consideration is the range of roles that may be available, including sensory scientist, sensory panel leader, or product developer.

Students may have concerns about the highly competitive job market for sensory professionals in Brazil. Given the growing need for sensory analysts with exceptional skills, individuals may have concerns about differentiating themselves from their colleagues and finding employment that matches their professional aspirations. One potential concern is the pressure of accurately evaluating and interpreting sensory data, as the outcomes of these analyses can greatly influence product development and consumer satisfaction.

Despite their concerns, students in sensory analysis in Brazil may find themselves eagerly anticipating the opportunity to utilize their knowledge and skills in a practical context. Working alongside industry professionals, conducting sensory tests, and actively contributing to the development of new and improved products are all exciting prospects that lie ahead. They may find great enthusiasm in the chance to significantly influence consumer preferences and market trends.

During their practical training, students have gained valuable skills including sensory evaluation techniques, statistical analysis, and data interpretation. They have a wealth of knowledge in conducting sensory tests, designing experiments, and collaborating with sensory panels. Their deep understanding of sensory science principles and methodologies showcases their ability to effectively apply their expertise in a professional environment.

From AI Understanding to the Minds of Actual Students

We now move from artificial intelligence, specifically LLM (large language models, e.g., ChatGPT) to the emerging science of Mind Genomics. Mind Genomics is relevant to our student’s efforts; it will give us ideas about how people think, ideas that the student can use. Mind Genomics deals with decision-making, specifically what is important to people in a topic area. Mind Genomics investigates

the psychology of the everyday world, doing so through simple to understand experiments that can be tailored to any aspect of daily life. There is no need to create artificial situations. A computer, a person, and a statistical analysis program are all that are needed as will be shown below. These are the requirements for our students to end up with a great deal more insight than could have been previously imagined. Furthermore, the process of Mind Genomics has been made even more accessible through a user-friendly platform incorporating AI, templated set-up for a study, automatic data analysis, templated reportage, and finally AI synthesis of insights across a variety of built-in prompts.

Mind Genomics has enjoyed more than two decades of development and application in such diverse areas as it is used in marketing, public policy, and healthcare. Marketing can use cognitive profiles to personalize products and messaging and interact with customers. Mind Genomics can help public policymakers create communication strategies and actions that match different demographic segments' cognitive preferences. Customizing treatment strategies and interventions to cognitive profiles improves healthcare results and patient satisfaction. These have already been discussed [13-16]. It is the next set of applications on which we focus here.

Mind Genomics can become a tool for pinpointing the precise types of questions to anticipate either asking or answering during the inevitable anxiety-provoking job interview for a sensory position. Ensuring that the questions asked are relevant and engaging for both the interviewer and the interviewee is crucial. By utilizing Mind Genomics, it becomes possible for the jobseeker graduate to get a sense of how to use the content of the sensory field, and by doing so end up directing the course of the conversation. The result is an enhanced ability to position oneself, based upon the nature of the interviewer, the nature of the company, and the nature of the job. This can assist in customizing the interview process to concentrate on the skills and knowledge crucial for success in the position.

Mind Genomics can be utilized to determine the most impactful methods of conveying essential details regarding the candidate's expertise and credentials when addressing these inquiries. By gaining a deep understanding of the interviewer's preferences and biases, the candidate can strategically customize their responses to highlight the most relevant aspects of their background. This approach increases the likelihood of making a strong impression on the interviewer.

Mind Genomics presents respondents with combinations of phrases (called test vignettes), gets the ratings to the vignettes, and through statistics (OLS, ordinary least squares regression) determines which phrases are essential. The student preparing for the job interview now has a tool to understand what is important to stress, at least from the pattern of responses of people who are knowledgeable, "in the know," and represent the world in which the sensory analysis candidate will operate. For this paper, the case "people" are colleagues who are looking for jobs, or professionals

already working in the field of business-oriented sensory analysis.

First steps — Getting into the Mind Genomics platform.

The process of Mind Genomics begins by accessing the website platform www.BimiLeap.com. Once the user has an account, the next step is to create a new study. After the study is created, the user, our student, must think about creating questions and answers.

The process begins with a simple task for the user, our student looking for a job. Figure 1 shows four panels. Panel 1A (top) shows the request to provide four questions relative to sensory analysis. Panel 1B (top) shows four questions, not necessarily provided directly from the knowledge of the user, our student, but rather with the help of AI, as discussed below. Panel 1C (bottom) shows the request to provide four answers to the first questions. Panel 1D (bottom) shows four answers provided by AI. The process looks easy, clean, simple. Behind this simplicity is the "*rest of the story*," as radio personality Paul Harvey was wont to say in his riveting tales about "what really happened."

The reality of the situation is that most people freeze when confronted with the requirement of Mind Genomics, namely, to generate four questions, which "tell a story" and then provide four answers to each question. The task of providing questions and then answers to those questions can be daunting. And the goal to produce something on the right, namely intelligent sounding questions and intelligent and relevant answers, is frightening to say the least. From the early years of Mind Genomics (1996 – 2021) most users struggled with producing questions and coming up with the answers to these questions. The education of people was simply inadequate. Many people persevered. Sadly, all too often prospective users simply dropped out and gave up, feeling that the task was too difficult. Many professionals fell into this class of dropouts. Remarkably, school students found the task fun and easy, once they understood what to do. It was a game. However, as we will see below, the fear is now unwarranted as of 2022 with the emergence of artificial intelligence. Fortunately, we are on the other side of this divide where artificial intelligence helps the user, here "our student," think and provide the information, as we see below.

It would be the introduction of AI in the form of LLMs, large language models, which forever changed Mind Genomics, making it accessible to anyone in the world, of any level of education or expertise. Figure 2 shows Idea Coach available in the templated system for Mind Genomics. The Idea Coach embeds AI in the form of LLM, a large language model. The user simply presses the button for Idea Coach and submits one or more paragraphs about the topic by way of background, along with relevant questions of interest to the user. (Our user is the student). The user can change the request about the topic, edit it, ask for three or four paragraphs about the topic. The AI returns with the requested information and with 15 questions. This is an iteration and can be repeated. An iteration requires about 10-15 seconds. At the end of the iteration(s), the user will have had a variety of questions presented and can take four of these questions and put them into the system

JOB\$1.

For your study, please choose four questions which story.

A

Idea Coach

Question 1*

Question 2*

Question 3*

Question 4*

I

JOB\$1.

For your study, please choose four questions which story.

B

Idea Coach

Question 1*

YOUR EXPERTISE

Question 2*

YOUR KNOWLEDGE

Question 3*

HOW YOU DESCRIBE YOURSELF

Question 4*

WHAT YOU CAN DO FOR OUR COMPANY

QUESTION 1/4: YOUR EXPERTISE:

Now choose four answers to this first question. Make the answers simple. Try to paint a picture with your words in mind of the respondent.

C

Idea Coach

Answer 1

Answer 2

Answer 3

Answer 4

QUESTION 1/4: YOUR EXPERTISE:

Now choose four answers to this first question. Make the answers simple. Try to paint a picture with your words in mind of the respondent.

D

Idea Coach

Answer 1

I can help you to determine if a product will be successful in the market

Answer 2

I can help you describe unique flavors, textures, and aromas in products

Answer 3

I can help you maintain product quality to meet consumer expectations

Answer 4

I can train panelists to help you to ensure accurate evaluation of your products

Figure 1: The screenshots for questions (Panel A = Request, Panel B = Delivered), and for answers to one question (Panel C = Request, Panel D = Delivered).

Use the BimiLeap Idea Coach to help formulate your four questions. Simply type in a short description of your idea, product, or whatever you are creating this study for and click submit. The Idea Coach will return up to 15 questions. You can use these questions as is, edit them, or write in your own.

I am a student at Campinas in sensory analysis. I am interviewing for a job. Help me. What are some questions that will be asked of me when I go for my first job. Phrase these as questions.
First, Tell me what to expect in my interview in 1 short paragraph
Second give me the hardest questions that they will ask me

A

Cancel **Submit**

Select 4 questions from the following to use in the study creation process or use them as a guide to create your own.

1. In your interview, you can expect to be asked about your experience in sensory analysis, your knowledge of sensory evaluation methods, your ability to work in a team and follow instructions, and your passion for the field. You may also be asked to participate in sensory tests or to provide examples of your work in sensory analysis.

2. Can you walk me through your past experience in sensory analysis?

3. What do you believe are the key components of an effective sensory evaluation method?

4. How do you handle working under tight deadlines and pressure?

B

Copy into study
Rerun for another 15 questions
Edit your original description and rerun

Figure 2: Example of the prompt for questions given to the AI embedded in Idea Coach. Panel A shows the instructions. Panel B shows the material returned by Idea Coach.

as shown by Figure 2, Panel B. It makes no difference to Mind Genomics where the questions come from: provided by the AI, AI questions edited by the user, or questions completely provided by the user. The same process occurs when developing the four answers to each question, except that the AI automatically uses the questions created to generate 15 answers, from which the four answers can be selected.

Setting up and Fielding the Mind Genomics Study

The Mind Genomics study itself follows a templated process; the standardization from the template allowing anyone to become a researcher. The important raw material now exists once the four questions are developed and the four answers to each question are created, either with the help of the Idea Coach or by thinking alone.

The test stimuli comprise *vignettes*.

1. A vignette is a specific combination of elements or answers.
2. An underlying experimental design specifies 24 combinations or vignettes.
3. Each vignette comprises two, three, or four answers or elements.
4. Each question or category contributes either no element to the vignette or at most one element to the vignette. At the end of the construction of the 24 vignettes for a single respondent, each element will appear five times in the set of 24 vignettes and be absent 19 times.
5. Each question or category thus contributes 20 elements to the 24 vignettes, and by design is absent from the remaining four vignettes.

An innovation in Mind Genomics is the creation of the permuted experimental design [17]. The design enables each study participant to evaluate a separate set of vignettes, a different set of combinations. The mathematical structure of the combinations remains unchanged. What changes is the specific set of combinations. The importance of this structure, this permuted design, cannot be overstated. Rather than requiring that the researcher or the investigator know the precise combinations to test, the Mind Genomics permuted isomorphic designs means that the user or the researcher need not know which combinations work, which combinations do not work. Like the MRI (magnetic resonance imaging) used in medicine, the approach investigates any different combinations, gets the response to each combination, and using computer analysis, puts together these responses as a big picture of the underlying set of things, the mind of the customer. As we will see, not having to know the right answer allows us to do the study rapidly, and not have anything stand in our way such as a need to formulate a hypothesis or test the “best guess” with many people to drive statistical significance if the hypothesis is correct. This abandonment of research based on a lot of knowledge to formulate hypotheses is important, especially to those who do not know their topic area very well but rather wish to explore a new area to develop foundational knowledge. In a sense, we are cartographers looking to map the area rather than trying to deduce what exactly are the right words, the right phrases, the right ideas. That is worth repeating. The approach is cartographic, exploratory,

mapping rather than proving.

After the researcher has decided about the elements, it is now time to set up the study. The study requires that the researcher provide the Mind Genomics platform with certain information at the time of study set-up. The questions and user-provided answers appear in Table 4. Figure 3 shows two screen shots of the researcher set-up experience (Panel 3A for the user-specified rating scale; Panel 3B for the user-specified introduction to the respondent), and then two screen shots of the respondent experience (Panel 3C for the self- profiling classification; Panel 3D for a sample vignette, with rating question and answers).

Table 4: Study questions for the Mind Genomics interview (done on a computer).

Select profiling classification (up to 8 are allowed)

Are you familiar with the world of Food Marketing? 1 = Yes 2 = No

Introduction to the respondent:

Assume you are a manager in a local food company, and you have a young candidate in front of you, who is telling you about their credentials. Please tell us how you feel about this person.

Rating question answered for each of the 24 vignettes evaluated by a respondent.

How do you feel?

1 = Do not hire them...AND...The company may not be ready for them quite yet.

2 = Do not hire them...EVEN THOUGH...Their skills fit the company's needs.

3 = I can't decide

4 = Hire them...BUT...Company may not be ready for them quite yet.

5 = Hire them...AND...Their skills fit the company's needs.

Study Execution

For this study, the 43 study respondents were Portuguese-speaking Brazilian students at UNICAMP or young professionals attending a sensory conference in Campinas in May 2024. Each respondent received a general invitation about the topic from one of the organizers of the conference with a request to participate. Most respondents were native Brazilians, students at the university who were majoring in food sensory science and attending the conference.

The process was simple. The respondent needed only to click on the embedded link in the email to be led to the study. Afterwards the study proceeded quickly with a short orientation, followed by a questionnaire for self-profiling (classification question) and finally to an introduction to the vignettes and the request to evaluate the next set of vignettes. Figure 1 (Panels A and B) shows some of the orientation material. Panel C shows the self- profiling questionnaire. This questionnaire can have up to eight user-provided questions about what the respondent does, believes, and so forth — information that could only be collected in surveys or by discussion.

The respondent evaluated one vignette at a time. Figure 1 (Panel D) shows an example of a vignette. As noted, the vignettes

RATING SCALE

Please type the question that you would like your respondents to answer.

How do you feel?

The lowest value is 1, choose the highest scale value.

You must fill in #1 and #5. You have an option of defining the numbers in between but it's not required.

What does 1 mean on the scale?

What does 2 mean on the scale?

What does 3 mean on the scale?

What does 4 mean on the scale?

What does 5 mean on the scale?

RESPONDENT ORIENTATION

Use this space to tell your study respondents what the study is about. We recommend 2-3 complete sentences. Be general, not too specific.

Normal : B I %

Assume you are a manager in a local food company, and you have a young candidate in front of you, who is telling you about their credentials. Please tell us how you feel about this person.

Thank you for participating. Please answer the following questions about yourself. This information will only be used for this study, and will not be given to any marketers for sales purposes.

Age: Choose

What year were you born?

Gender identification: Choose

Are you familiar with the world of Food Marketing? Choose

I understand that the information I give will not be used to identify who I am, nor will I be asked to provide private information which can identify me

Assume you are a manager in a local food company, and you have a young candidate in front of you, who is telling you about their credentials. Please tell us how you feel about this person.

How do you feel?

1 = Do not hire them... AND... Company may not be ready for them quite yet.
 2 = Do not hire them... EVEN THOUGH... Their skills fit company needs
 3 = I can't decide
 4 = Hire them... BUT... Company may not be ready for them quite yet.
 5 = Hire them... AND... Their skills fit company needs

I can help you describe unique flavors, textures, and aromas in products.
 I use virtual reality simulations to conduct sensory tests in controlled environments.
 Hire me because I am a cross-disciplinary sensory science professional knowledgeable in several fields such as psychology, food science, and marketing.
 I can teach you to create interactive digital displays to showcase your products in a more engaging way.

1 2 3 4 5

Figure 3: Screenshots of the researcher set-up experience. (Panel 3A for the user-specified rating scale; Panel 3B for the user-specified introduction to the respondent), and then screen shots of the respondent experience (Panel 3C for the self-profiling classification; Panel 3D for a sample vignette, with rating question and answers).

comprise two, three, or four phrases, the so-called elements. It was impossible for the respondent to game the system because, in the words of psychologist William James, the combinations were *a blooming, buzzing confusion*. The underlying experimental design ensured that it would be impossible to “game the system.” Most respondents stop trying to game the system and go into an alpha state where they just simply respond, feeling like they are guessing. Indeed, many of the exit interviews and volunteered comments surfaced the impression that the test materials, the vignettes, seemed to be a mishmash, a jumble of ideas. The interviewees admitted that it was impossible to “figure out the pattern, so they ended up guessing,” *precisely what was desired*.

Analysis and Modeling

We know from the experimental design and for each vignette what elements were present and what elements were absent. Figure 4 shows the part of the data. The information is structured for a database, prepared for statistical analysis. Each column has a specific type of information (see Table 5).

Table 5: Explication of the data columns in Figure 4.

1	= The respondent number
2	= Genders (1=male, 2=female) and age
3	= Rating on self-profiling classification (Quest1)
4	= Membership of the respondent in the two-mind-set clustering, and the membership of the respondent in the three-mind-set clustering (to be discussed below).
5	= Test order out of 24 vignettes
6	= Presence (1) or absence (0) of the element in the vignette
7	= The five-point rating
8	= Transformed binary rating R54 “hire” (rating of 5, 4 → 100, ratings of 1,2,3 → 0)

Figure 4: Screenshot of data set up for a database and for OLS (ordinary least squares) regression analysis.

Respon	Gender	Age	Quest1	TWO MS	THREE MS	Test Order	Rating																R54
							A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4	D1	D2	D3	D4	
102	1	31	1	2	3	5	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	5 100
102	1	31	1	2	3	6	0	1	0	0	1	0	0	0	0	0	1	1	0	0	0	0	5 101
108	1	27	1	1	1	6	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	4 100
108	1	27	1	1	1	7	1	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	4 100
111	2	39	1	1	1	15	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	3 1
111	2	39	1	1	1	16	1	0	0	0	0	0	1	0	0	0	0	0	0	1	0	3 1	
143	1	27	1	1	1	21	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2	1
143	1	27	1	1	1	22	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	2	0
102	1	31	1	2	3	3	0	1	0	0	0	1	0	0	1	0	0	0	1	0	0	0	1
102	1	31	1	2	3	7	1	0	0	0	0	1	0	0	0	1	0	0	0	1	0	1	0

Although most researchers like to work with the scales that they use, we have found that many of the users who look at the scales do not really know what the scales mean. For example, they don't know what a 2.6 means or a 4.5 means. They ask, *is this important, is this not important, what should I do?*

To make the results easier to interpret for users, the Mind Genomics approach works with transformed scales, beginning with a Likert

scale (viz., the 5-point scale used here), but then transformed to make the results easier to understand. For example:

When the rating is “hire” (5, 4), we transform the value to 100. When the rating is “don't hire,” or “don't know” (1,2,3) we transform the rating to 0.

We also add a vanishingly small random number to the rating. The random number ensures that we will have some marginal variation among the transformed ratings of the 24 vignettes for each respondent, even when we end up with the same transformed rating for a respondent across 24 vignettes. We need the variation for regression analysis. Figure 4 shows some transformed ratings (R54) as 101 or 1, rather than as 100 or 0. This small departure from 100 or 0 makes no difference for the analysis, but is critical to prevent statistical failure (viz, crash of the regression-modeling program).

We express the relation between the elements and the rating by the following expression:

$$R54 \text{ (Binary Transform...Hire)} = k1(A1) + k2(A2) + \dots + k16(D4)$$

The binary transform variable is the weighted sum of the coefficients for the elements present in the vignette. We use the standard procedure of ordinary least squares (OLS) regression to estimate the contributing power of every single element, viz. the coefficients k1- k16.

Note also that there is no additive constant. We want all explanation of variation across the ratings of the vignettes to come from the 16 coefficients, k1-k16. This is known as “forcing the regression through the origin.” Empirical analyses suggest that the pattern of the 16 coefficients is the same when we force the regression through the origin versus when we estimate the additive constant. That is, the coefficients may differ but across the 16 elements in the study, a scatterplot will show the two sets of coefficients to be highly correlated.

We perform the regression analysis three times, first for all 43 respondents, then separately for the 10 males versus the 33 females. Table 6 shows the coefficients. We have shaded all cells having coefficients of 21 or higher. That is because statistically these are the coefficients, which are most significant.

Often with the total panel or with gender we can discover a pattern, a story, although the story is not a strongly compelling one. This may be the case with our results here, at least so far. Table 6 shows a gender difference for the elements in category or question A: “Your expertise.” Male respondents feel that “would hire” (R54) is strongly driven by “Your Expertise.” The females do not feel that way. There is the beginning of a story here. We could stop here, and be “ahead,” just from this knowledge. On the other hand, as we will see below, this is a bigger story when we look at mind-sets.

Table 6: Coefficients from OLS model relating presence/absence of the 16 elements to the transformed binary rating 54 (“Hire”).

Group (Binary Ratings)		TOTAL	MALE	FEMALE
Base Size		43	10	33
Question A: Your expertise				
A1	I can help you to determine if a product will be successful in the market.	13	24	11
A2	I can help you describe unique flavors, textures, and aromas in products.	16	38	11
A3	I can help you maintain product quality to meet consumer expectations.	12	26	8
A4	I can train panelists to help you to ensure accurate evaluation of your product	16	32	13
Question B: Your knowledge				
B1	I use biometric measurements for more precise and objective sensory feedback.	31	33	31
B2	I use machine learning algorithms to personalize sensory testing based on individual preferences.	24	21	25
B3	I use virtual reality simulations to conduct sensory tests in controlled environments.	22	22	22
B4	I use artificial intelligence to analyze vast amounts of sensory data and identify patterns.	26	29	26
Question C: How you describe yourself				
C1	Hire me because I can integrate sensory evaluations into product development processes.	21	24	21
C2	Hire me because I am a cross-disciplinary sensory science professional knowledgeable in several fields such as psychology, food science, and marketing.	16	7	17
C3	Hire me because I understand the physiological and psychological aspects of sensory perception.	19	12	21
C4	Hire me because I can apply my expertise to a variety of industries such as food, cosmetics, and pharmaceuticals.	22	19	22
Question D: What can you do for my company				
D1	I can teach you about 3D scanning technology to create highly accurate product models.	29	27	30
D2	I can teach you about innovative packaging materials to enhance the sensory experience of products.	25	23	25
D3	I can set up sensory testing panels to gather feedback on new products.	27	23	28
D4	I can teach you to create interactive digital displays to showcase your products in a more engaging way.	24	26	24

Moving into the World of Mind-Sets

Let us move forward beyond our looking at the total panel or males or females and let's look at the notion of mind-sets. The notion of mind-sets is that there are people who are very different from each other, not by who they are but by the way they look at the world through the lens of a specific topic, here sensory analysis expertise. Table 7 shows how AI (ChatGPT 3.5, embedded in BimiLeap) can provide AI-generated answers to a variety of questions about Mind-Set. We will soon augment the information in Table 7 with human results, but we will start here by using AI. For the student looking for the job, it will be much easier.

Mind-Sets in Our Empirical Study, What Can AI Tell Us Which Will Help Us Move Forward

To discover mind-sets in our data, we follow a very simple process. We begin by creating a model for each of our 43 respondents. The

model is the same type of model that we created when we did the results for the total panel and for the two genders, namely, $R54$ (likelihood of hiring) = $k1A1+k2A2+...k16D4$. The only difference is that we estimate the 16 parameters of each equation for one of our 43 respondents. Our work at the start of the session is the same — comprising using a permuted design, using a different set of combinations for each new respondent, instructing the program to add a small random number to every binary rating so we know that the data are in the proper form. Once we do that, we have a block or database of 43 rows, one row for each of the 43 respondents and 16 columns, one column for each of the 16 elements from A1 to D4.

Table 7: How AI describes mind-sets and their uses.

Mind-sets are the beliefs and attitudes that shape how individuals interpret and respond to various situations. In the context of a job interview, understanding the mind-set of the employer or interviewer is crucial in presenting oneself effectively. By knowing their mind-set, you can tailor your responses and communication style to align with their expectations, increasing the likelihood of making a positive impression.

Having a tool to determine the mind-set of the employer or interviewer can give you a competitive edge in the job application process. By understanding their preferences, values, and priorities, you can adapt your approach to better resonate with them. This can help you build rapport, demonstrate your fit for the role, and ultimately increase your chances of getting hired.

The science of Mind Genomics offers a systematic approach to identifying different mind-sets by analyzing responses to various stimuli. By conducting surveys or experiments, researchers can uncover patterns in how different individuals perceive and respond to different messages or stimuli. When combined with large language models (LLM), such as AI algorithms trained on vast amounts of text data, these Mind Genomics ideas can be further refined and applied to real-world situations, such as job interviews.

Questions based on the importance of mind-sets in job interviews and the use of Mind Genomics and LLM:

1. *How does understanding the mind-set of the interviewer impact your chances of getting hired?*
2. *What role do mind-sets play in shaping how individuals interpret interview questions?*
3. *How can Mind Genomics help identify the mind-set of the interviewer?*
4. *What are some ways to adapt your communication style based on the employer's mind-set?*
5. *How can large language models enhance the effectiveness of Mind Genomics in understanding mind-sets?*
6. *Can you give an example of how aligning with the interviewer's mind-set led to a successful job interview?*
7. *Why is it important to tailor your responses to match the employer's mind-set?*
8. *How can identifying the mind-set of the interviewer help you stand out among other candidates?*
9. *What strategies can you use to determine the mind-set of the interviewer before the interview?*
10. *How do mind-sets influence the types of questions asked in a job interview?*
11. *In what ways can Mind Genomics insights be applied to improve your interview performance?*
12. *How can LLM technology contribute to a deeper understanding of mind-sets in the job application process?*
13. *What are the potential benefits of using Mind Genomics and LLM in preparing for a job interview?*
14. *How can understanding the mind-set of the employer help you tailor your resume and cover letter?*
15. *What are some common mistakes candidates make in not considering the mind-set of the interviewer during a job interview?*

The numbers in the body of the table are the coefficients emerging from OLS or Ordinary Least Squares regression. The process is very straightforward and is done quickly and automatically by computer thanks to the work that we did in setting up the study. The two efforts were that that each respondent would evaluate a unique set of 24 vignettes created by experimental design, and the prophylactic precaution of adding a small random number to each transform variable.

The next step consists of using k-means clustering to divide the 43 respondents twice, first into two non-overlapping clusters (called mind-sets in the language of Mind Genomics), and then once again into three non-overlapping clusters. In other words, we're looking for groups of people whose patterns of 16 coefficients look like each other. As a measure of "difference" between people, we use the value (1-Pearson Correlation), with the Pearson correlation calculated across the 16 corresponding coefficients. The clustering tries to put together people with low D values so that the patterns of coefficients within a cluster or mind-set are similar.

Table 8 shows what happens when we divide the people first into three groups, and then into two groups, and then of course into one group. We will focus on the three mind-sets emerging from the analysis, and not pay attention to the two mind-sets.

We have divided our 43 respondents into three mind-sets or clusters, by telling the computer program that there are three groups. When the clustering program [18] does its work, it comes up with three groups. The clustering program does the work based strictly on mathematical criteria. Our analysis is based strictly on interpretability; the results must make sense.

Our simple k-means segmentation suggests three quite different mind-sets. Within a mind-set the respondents may vary quite a bit, in the ways that we typically define people. Yet, when it comes to thinking about what is important for hiring a student specializing in sensory analysis, people in a mind-set think alike, people in different mind-sets think differently.

1. The first segment or mind-set seemed to have high numbers for students who focus on sensory science innovators and integrators, the students who focus on their own abilities, on themselves.
2. Now let's go to the second group, and let's see what's very strong there. These students are called sensory technology innovators. They want to teach everybody about the technology, and we can see the strong elements. They may not even know that they're in this group, but you see that they're not necessarily the same thinking as the first mind-set, the first segment.
3. Finally, there's the third group, students who want to solve company problems, sensory research and innovation solutions, and they're totally different.

The learning here says that in the minds of these students, there are different things that they believe the interviewer may look for. Some of them think that the important stuff is innovation and integration. Some believe that the important stuff is technology

innovation, and some believe that the important stuff is research and innovation leading to solutions to the company problems. As we will see, the fact that there are different thoughts in people about what's important means that the students have an advantage once they understand that there are these different mind-sets. They can go into the interview more prepared.

Table 8: The strong performing elements for each mind-set, for the three-mind-set solution, the two-mind-set solution, and finally the total panel.

	of 3	MS 1	of 3	MS 2	of 3	MS 3	of 2	MS 1	of 2	MS 2	Total
Base (number of respondents in this group)	14	19	10	19	24	43					
SENSORY SCIENCE INNOVATORS & INTEGRATORS											
Students who focus on themselves											
I use biometric measurements for more precise and objective sensory feedback.	39	33	17	34	28	31					
I use machine learning algorithms to personalize sensory testing based on individual preferences.	38	22	6	32	17	24					
I use virtual reality simulations to conduct sensory tests in controlled environments.	36	18	10	31	15	22					
I use artificial intelligence to analyze vast amounts of sensory data and identify patterns.	32	27	19	33	22	26					
Hire me because I can apply my expertise to a variety of industries such as food, cosmetics, and pharmaceuticals.	29	19	17	30	16	22					
Hire me because I can integrate sensory evaluations into product development processes.	29	19	15	25	19	21					
Hire me because I understand the physiological and psychological aspects of sensory perception.	25	19	13	23	16	19					
Hire me because I am a cross-disciplinary sensory science professional knowledgeable in several fields such as psychology, food science, and marketing.	22	17	8	20	14	16					
SENSORY TECHNOLOGY INNOVATORS											
Students who want to teach											
I can teach you about 3D scanning technology to create highly accurate product models.	14	42	27	17	38	29					
I use biometric measurements for more precise and objective sensory feedback.	39	33	17	34	28	31					
I can set up sensory testing panels to gather feedback on new products.	18	31	32	17	33	27					
I can teach you to create interactive digital displays to showcase your products in a more engaging way.	10	30	34	11	34	24					
I can teach you about innovative packaging materials to enhance the sensory experience of products.	19	29	25	17	31	25					
I use artificial intelligence to analyze vast amounts of sensory data and identify patterns.	32	27	19	33	22	26					
I use machine learning algorithms to personalize sensory testing based on individual preferences.	38	22	6	32	17	24					
SENSORY RESEARCH & INNOVATION SOLUTIONS											
Students who want to solve company problems											
I can help you describe unique flavors, textures, and aromas in products.	6	11	39	10	22	16					
I can teach you to create interactive digital displays to showcase your products in a more engaging way.	10	30	34	11	34	24					
I can set up sensory testing panels to gather feedback on new products.	18	31	32	17	33	27					

I can teach you about 3D scanning technology to create highly accurate product models.	14	42	27	17	38	29
I can teach you about innovative packaging materials to enhance the sensory experience of products.	19	29	25	17	31	25
I can help you to determine if a product will be successful in the market.	6	14	24	12	15	13
I can help you maintain product quality to meet consumer expectations.	13	3	24	19	7	12
I can train panelists to help you to ensure accurate evaluation of your product	12	13	23	16	17	16

How AI Can Help Understand More Deeply After the Study

Table 8 showed us the different mind-sets, specifically for three mind-sets, but also for two mind-sets, and then for total. What's very important for us is what can we learn from this? How can we get smarter? When the student has this information, already the student is quite a bit smarter than before. Indeed, just a little bit of empirical research provides a great deal of information.

One of the benefits of the Mind Genomics platform, BimiLeap, is its interpretation of the results after the fact. The data presented in Table 8 simply gives us the strong and the weak performing elements. It would be interesting if we could have artificial intelligence programmed to look at the data and answer a variety of questions, not based upon the person, but using AI itself. Those answers, those questions and answers, appear in Table 9.

Table 9: AI analysis of the strong performing elements (coefficient ≥ 21) for the three mind- sets.

MIND-SET 1 OF 3

Create a label for this segment: "Sensory Science Innovators."

Describe this segment: This segment of individuals in the research study is highly skilled and knowledgeable in utilizing advanced technologies such as biometric measurements, machine learning algorithms, virtual reality simulations, and artificial intelligence to conduct sensory testing and analysis. They are able to provide precise and objective feedback, personalize testing based on individual preferences, and identify patterns in large amounts of data. They are also experienced in integrating sensory evaluations into product development processes and have a strong understanding of the physiological and psychological aspects of sensory perception. This segment is versatile, as they can apply their expertise to various industries such as food, cosmetics, and pharmaceuticals. Overall, they are interdisciplinary professionals with a deep understanding of sensory science and its applications.

Describe the attractiveness of this segment as a target audience: This segment of individuals is highly attractive as a target audience due to their cutting-edge approach to sensory testing and evaluation. Their use of biometric measurements, machine learning algorithms, virtual reality simulations, and artificial intelligence sets them apart as experts in the field of sensory science. Employing individuals with a cross-disciplinary background in psychology, food science, and marketing also increases their attractiveness as they can bring a diverse range of expertise to the table.

Furthermore, their understanding of the physiological and psychological aspects of sensory perception makes them valuable assets for any organization looking to improve their product development processes. Their ability to apply their expertise across industries such as food, cosmetics, and pharmaceuticals further emphasizes their versatility and appeal as a target audience. Overall, this segment of individuals is highly attractive due to their innovative approaches and broad skillset in the field of sensory science.

Explain why this segment might not be attractive as a target audience: This segment may not be attractive as a target audience for certain industries or organizations that do not prioritize or place a strong emphasis on sensory evaluations, biometric measurements, machine learning algorithms, virtual reality simulations, and artificial intelligence in their product development processes. Additionally, hiring a cross-disciplinary sensory science professional may not be a priority for companies that do not operate in industries where sensory evaluation plays a critical role, such as food, cosmetics, and pharmaceuticals. This segment may also not be attractive to organizations that do not have the resources or infrastructure to support the integration of advanced sensory testing techniques into their operations.

List what is missing or should be known about this segment, in question form:

1. Have you conducted any research or studies to validate the effectiveness of using biometric measurements for sensory feedback?
2. How do you ensure that the machine learning algorithms accurately personalize sensory testing based on individual preferences?
3. What specific virtual reality simulations do you use for conducting sensory tests?
4. Can you provide examples of how artificial intelligence has helped in analyzing sensory data and identifying patterns?
5. In what ways do you integrate sensory evaluations into product development processes?
6. Can you provide examples of how your cross disciplinary knowledge in fields such as psychology, food science, and marketing has benefited your previous projects?
7. How do you apply your understanding of physiological and psychological aspects of sensory perception in practical situations?
8. Can you provide specific examples of how your expertise has been applied in different industries such as food, cosmetics, and pharmaceuticals?

These pieces of information automatically emerge approximately 15 minutes after the study is done. The results provide another perspective, this time from artificial intelligence looking independently at the strong performing elements and trying to discern a meaningful "story."

For each of our three mind-sets, Table 9 shows seven questions and AI's respective analysis to each question.

1. Question 1: Create a label for this segment or this mind-set.
2. Question 2: Describe this segment or mind-set.
3. Question 3: Describe the attractiveness of this mind-set.
4. Question 4: Explain why this mind-set might not be attractive as a target audience.
5. Question 5: List what is missing or should be known in question form.
6. Question 6: Briefly describe attractive or new products.
7. Question 7: Provide messages for this segment.

We finish this paper with practical advice from artificial intelligence about how students might practice and might prepare for an interview when they know themselves, the target company, and even know about their interviewer or at least can quickly surmise. Table 10 was generated by AI to help coach the student. The results are based upon the nature of the mind-set.

List and briefly describe attractive new or innovative products, services, experiences, or policies for this segment:

1. **Biometric feedback devices for personalized sensory experiences:** Develop wearable devices that use biometric measurements to provide real time feedback on an individual's sensory reactions to products or experiences. This technology can help consumers optimize their sensory experiences based on their physiological responses.
2. **Personalized sensory testing apps:** Create mobile apps that use machine learning algorithms to tailor sensory tests and recommendations based on individual preferences. This can empower consumers to better understand their own sensory preferences and make informed choices when selecting products.
3. **Immersive virtual reality sensory experiences:** Design virtual reality simulations that recreate realistic sensory environments for conducting sensory tests or experiences. This can provide a controlled and customizable way to test products or services in virtual settings, enhancing the overall sensory experience for consumers.
4. **AI powered sensory data analysis platforms:** Develop artificial intelligence platforms that can analyze vast amounts of sensory data to identify patterns and trends. This can provide valuable insights for companies looking to understand consumer preferences and optimize their products based on sensory feedback.
5. **Cross disciplinary sensory science consulting services:** Offer consulting services from professionals with expertise in various fields such as psychology, food science, and marketing. These experts can help companies integrate sensory evaluations into their product development processes, ensuring that products are appealing to consumers on multiple sensory levels.
6. **Sensory perception training workshops:** Provide workshops or training sessions that focus on understanding the physiological and psychological aspects of sensory perception. This can help individuals and companies better utilize sensory feedback in product development and marketing strategies.
7. **Industry specific sensory evaluation programs:** Develop industry specific sensory evaluation programs for sectors such as food, cosmetics, and pharmaceuticals. These programs can help companies in these industries optimize their products based on consumer sensory preferences, leading to increased customer satisfaction and loyalty.

Which messages will interest this segment?

1. I use machine learning algorithms to personalize sensory testing based on individual preferences.
2. I use virtual reality simulations to conduct sensory tests in controlled environments.
3. I use artificial intelligence to analyze vast amounts of sensory data and identify patterns.
4. Hire me because I can integrate sensory evaluations into product development processes.
5. Hire me because I am a cross disciplinary sensory science knowledgeable in several fields such as psychology, food science, and marketing.
6. Hire me because I understand the physiological and psychological aspects of sensory perception.

MIND-SET 2 OF 3

Create a label for this segment: "Sensory Technology Innovators."

Describe this segment: This segment of the research study participants is highly advanced, and technology driven. They are experts in using biometric measurements, machine learning algorithms, and artificial intelligence to obtain precise and personalized sensory feedback. They are well versed in innovative technologies such as 3D scanning and digital displays to enhance the sensory experience of products. They are also experienced in setting up sensory testing panels to gather valuable feedback on new products. Overall, they are at the forefront of utilizing technology to optimize sensory experiences and enhance product development.

Describe the attractiveness of this segment as a target audience: This segment of individuals seems highly knowledgeable and tech savvy, utilizing biometric measurements, machine learning algorithms, and artificial intelligence in sensory testing. They are interested in staying at the forefront of technology and innovation in the sensory experience industry. Their expertise in 3D scanning technology, innovative packaging materials, and creating interactive digital displays makes them valuable targets for companies looking to enhance their products' sensory experience. Additionally, their ability to set up sensory testing panels shows a commitment to gathering feedback and improving product quality. Overall, this segment is attractive as a target audience due to their advanced skill set and willingness to incorporate cutting edge technology into their work.

Explain why this segment might not be attractive as a target audience: This segment may not be attractive as a target audience because they already have advanced knowledge and skills in utilizing biometric measurements, machine learning algorithms, artificial intelligence, 3D scanning technology, innovative packaging materials, and sensory testing panels. They may not be seeking basic information or training on these topics, as they are likely already well versed in these areas. Additionally, their focus on utilizing cutting-edge technology and methodologies may indicate that they are more interested in pushing the boundaries of sensory research than in seeking out basic training or information. As such, marketing efforts towards this segment may not be as successful as they may already feel confident in their expertise in these areas.

List what is missing or should be known about this segment, in question form:

1. What is the size and demographic makeup of the sample population?
2. How was the data collected and what methods were used to ensure accuracy and reliability?
3. What specific biometric measurements and machine learning algorithms were used in the study?
4. What type of sensory data was collected and what patterns were identified through artificial intelligence analysis?
5. How does 3D scanning technology and innovative packaging materials enhance the sensory experience of products?
6. What criteria were used to select individuals for the sensory testing panels?
7. How were the interactive digital displays created and what impact did they have on showcasing products?
8. What were the results or conclusions drawn from the sensory testing and data analysis processes?

List and briefly describe attractive new or innovative products, services, experiences, or policies for this segment:

1. **Personalized sensory testing services:** Offering personalized sensory testing experiences using machine learning algorithms to tailor the testing based on individual preferences can provide a more accurate and enjoyable experience for consumers.
2. **AI-driven sensory data analysis:** Utilizing artificial intelligence to analyze vast amounts of sensory data can help identify patterns and trends to improve product development and marketing strategies.
3. **3D scanning technology for product modeling:** Teaching individuals about 3D scanning technology can help them create highly accurate product models, leading to improved product design and development processes.
4. **Innovative packaging materials:** Introducing innovative packaging materials that enhance the sensory experience of products can attract customers looking for unique and engaging packaging solutions.
5. **Interactive digital displays:** Educating individuals on creating interactive digital displays can help businesses showcase their products in a more engaging and interactive way, attracting customers and enhancing their overall sensory experience.

Which messages will interest this segment?

1. I use biometric measurements for more precise and objective sensory feedback.
2. I use machine learning algorithms to personalize sensory testing based on individual preferences.
3. I use artificial intelligence to analyze vast amounts of sensory data and identify patterns.
4. I can teach you about 3D scanning technology to create highly accurate product models.
5. I can teach you about innovative packaging materials to enhance the sensory experience of products.
6. I can set up sensory testing panels to gather feedback on new products.

MIND-SET 3 OF 3

Create a label for this segment: "Sensory Research & Innovation Solutions."

Describe this segment: This segment is focused on research and development in the food industry, specifically on creating and enhancing product offerings. The individuals in this segment possess expertise in sensory evaluation, product quality maintenance, panelist training, 3D scanning technology, innovative packaging materials, sensory testing panels, and interactive digital displays. They are knowledgeable about consumer preferences and trends in the market and can provide valuable insights on how to make products more appealing and successful. They are skilled at gathering feedback, analyzing data, and implementing strategies to improve product performance and deliver a unique sensory experience to consumers.

Describe the attractiveness of this segment as a target audience: This segment of the research sample appears to be highly knowledgeable and skilled in various aspects of product development and marketing. They can provide valuable insights into product quality, unique features, and consumer expectations. Their expertise in sensory evaluation, 3D scanning technology, packaging, and digital marketing makes them a very attractive target audience for companies looking to launch successful products in the market. Their capabilities in setting up sensory testing panels and creating interactive displays can greatly benefit businesses in gathering feedback and engaging customers effectively. Overall, this segment offers a wealth of expertise and resources that can greatly enhance the success of a product in the market.

Explain why this segment might not be attractive as a target audience: This segment might not be attractive as a target audience because they seem to be focused more on the technical and operational aspects of product development and quality control rather than on consumer preferences and marketing strategies. They may not have a strong understanding of consumer behavior, market trends, and branding strategies, which are crucial for launching a successful product in the market. Additionally, their expertise in sensory evaluation and product testing may not necessarily translate into the ability to effectively market and promote a product to consumers.

List what is missing or should be known about this segment, in question form:

1. What is the size of the total sample?
2. What are the demographics of the total sample (age, gender, income level, etc.)?
3. What are the specific products being tested in the research study?
4. What are the specific criteria for success in the market?
5. What are the key attributes that consumers are looking for in products?
6. How will the feedback from sensory testing panels be used to make decisions?
7. What is the budget for implementing new technologies and materials in product development?
8. How will the success of interactive digital displays be measured in terms of ROI?

List and briefly describe attractive new or innovative products, services, experiences, or policies for this segment:

1. Interactive digital displays for showcasing products: By creating engaging and interactive digital displays, businesses can attract more customers and effectively showcase their products in a unique way, enhancing the overall customer experience.
2. Innovative packaging materials to enhance sensory experience: Utilizing new and innovative packaging materials can enhance the sensory experience of products for consumers, making them more appealing and memorable.
3. Setting up sensory testing panels for gathering feedback on new products: By setting up sensory testing panels, businesses can gather valuable feedback on new products, ensuring that they meet consumer expectations and preferences.
4. Overall, these new and innovative products and services can help businesses in understanding consumer preferences, improving product quality, and creating engaging experiences for their target audience.

Which messages will interest this segment?

1. I can help you maintain product quality to meet consumer expectations.
2. I can train panelists to help you ensure accurate evaluation of your product.
3. I can set up sensory testing panels to gather feedback on new products.
4. I can teach you about innovative packaging materials to enhance the sensory experience of products.

Table 10: AI-generated tool to help coach sensory science graduates in their interview. All statements and questions are suggestions only, synthesized by ChatGPT 3.5, based on the strong performing elements for the mind-set, shown in Table 8.

MIND-SET 1: "SENSORY SCIENCE INNOVATORS."

STUDENTS WHO FOCUS ON THEMSELVES IN TERMS OF THE KNOWLEDGE AND ABILITIES THEY HAVE

During the interview, the student may come across as confident and self-assured, eager to showcase their knowledge and abilities in sensory analysis. The interviewer may feel impressed by the student's level of expertise and passion for the subject. However, they may also feel a slight sense of arrogance or self-centeredness in the student's responses. The interviewer may think, "This candidate definitely knows their stuff, but do they have the humility and teamwork skills necessary for the role?"

1. Can you tell us about your experience and background in sensory analysis?
2. What specific skills do you possess that make you a strong candidate for this role?
3. How do you stay current on developments and trends in sensory analysis?

4. Can you provide an example of a project where you successfully utilized your sensory analysis skills?
5. How do you handle feedback or constructive criticism on your work?
6. What sets you apart from other candidates applying for this position?
7. How do you approach problem-solving in sensory analysis?
8. Can you discuss a challenging project you worked on and how you overcame obstacles?
9. How do you prioritize tasks and manage your time effectively?
10. How do you handle working in a team environment?
11. What motivates you in your career and how do you continue to grow and develop your skills?
12. How do you handle stressful situations or tight deadlines in your work?
13. Can you provide an example of a time when you had to think creatively to solve a problem in sensory analysis?
14. How do you ensure accuracy and precision in your sensory analysis work?
15. Why do you believe you are the best candidate for this position?

MIND-SET 2: "SENSORY TECHNOLOGY INNOVATORS."

STUDENTS WHO WANT TO TEACH

During the interview, the student may come across as enthusiastic and passionate about sensory analysis, showing a strong desire to share their knowledge and educate others. The interviewer may feel inspired by the student's dedication to teaching and mentoring others in the field. However, they may also wonder if the student is more focused on teaching than on the practical application of sensory analysis in a job setting. The interviewer may think, "This candidate has a lot of potential as a teacher, but are they willing to put in the necessary work to excel in a professional role?"

1. Can you discuss your experience with teaching or mentoring others in sensory analysis?
2. What motivates you to educate and share your knowledge with others?
3. How do you adapt your teaching style to different learning preferences?
4. Can you provide an example of a successful teaching moment in sensory analysis?
5. How do you stay current on industry developments and trends to incorporate into your teaching?
6. What do you believe are the key principles to effective teaching in sensory analysis?
7. How do you handle student feedback or questions in your teaching?
8. Can you discuss a challenging teaching situation you encountered and how you resolved it?
9. How do you balance your passion for teaching with your own career development in sensory analysis?
10. How do you approach problem-solving in a teaching environment?
11. What do you hope to achieve through teaching in sensory analysis?
12. How do you stay organized and manage your time effectively as a teacher?
13. Can you provide an example of a time when you had to think creatively to teach a concept in sensory analysis?
14. How do you ensure clarity and understanding in your teaching materials and methods?
15. Why do you believe you are well-suited for a teaching role in sensory analysis?

MIND-SET 3: "SENSORY RESEARCH & INNOVATION SOLUTIONS."

STUDENTS WHO WANT TO SOLVE COMPANY PROBLEMS

During the interview, the student may come across as analytical and strategic, focused on how their skills in sensory analysis can help solve real-world problems for the company. The interviewer may feel impressed by the student's ability to think critically and offer practical solutions to business challenges. However, they may also wonder if the student has the necessary experience or knowledge to effectively address the company's specific issues. The interviewer may think, "This candidate has a strong problem-solving mind-set, but do they have the practical skills to implement their solutions in a professional setting?"

1. Can you discuss your experience in solving company problems through sensory analysis?
2. What motivates you to apply your skills in sensory analysis to address business challenges?
3. How do you analyze and assess company needs and opportunities in sensory analysis?
4. Can you provide an example of a successful project where you helped solve a company problem using sensory analysis?
5. How do you stay current on industry developments and trends to apply to company issues?
6. What do you believe are the key principles to effective problem-solving in sensory analysis for companies?
7. How do you manage feedback or critique on your proposed solutions to company problems?
8. Can you discuss a challenging company problem you encountered and how you developed a solution?
9. How do you balance creativity and practicality in your problem-solving approach?
10. How do you approach communication and collaboration with different departments or stakeholders in a company setting?
11. What do you hope to achieve through solving company problems with sensory analysis?
12. How do you stay organized and prioritize tasks to address multiple company issues simultaneously?
13. Can you provide an example of a time when you had to think innovatively to solve a company problem through sensory analysis?
14. How do you ensure efficiency and effectiveness in implementing your solutions for companies?
15. Why do you believe you are the ideal candidate to help solve company problems using sensory analysis?

Discussion and Conclusions

The development of new technologies such as artificial intelligence through large language models enables us to move forward in understanding the opportunities and the barriers for professional development. This paper represents one of the first attempts to synthesize this approach specifically for the world of sensory research, a world which is now celebrating more than 50 years of success, but a world which is evolving very quickly. Had one had the opportunity to do artificial intelligence 50 years ago at the beginning of this field or even perhaps 60 years ago, these questions, these opportunities would not have emerged so clearly. It is only with the development of interest by companies and by universities in the work of sensory analysis that we have this ability to look at where a new graduate might fit in, what a new graduate might contribute. We are fortunate to be living in a period where the opportunity for artificial intelligence to augment student efforts is just beginning and just being recognized.

This is only the first of a variety of planned papers on professional development in fields. It is a simple study which emerged as a demonstration of the potential when artificial intelligence is combined with the thinking provided by Mind Genomics. It is one of the first, but certainly not the last. We may expect to see this approach used either for theory or for practice to map the development of the field. The vision, however, is that this and subsequent papers serve as an aid to students who are applying for their first job and need some understanding of the realities of the world into which they are about to enter.

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