**Functional Requirements Document (FRD)**

**Project Name:** JTBD Interview Simulator  
**Document Version:** 1.2  
**Date:** 14.12.2024  
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**1. Document Control**

| **Version** | **Date** | **Author** | **Description** |
| --- | --- | --- | --- |
| 1.0 | 2024-10-29 | Arie Carmon | Initial draft |
| 1.1 | 2024-11-10 | Arie Carmon | Advanced version |
| 1.2 | 2024-12-14 | Arie Carmon | New evaluation & scoring |

**2. Introduction**

**2.1 Purpose**

This document outlines the functional requirements for the JTBD Interview Simulator, a web application, to ensure all stakeholders have a clear understanding of the system functionality.

**2.2 Scope**

This FRD applies to the purpose, roles, UI and functionality of the application.

**2.3 Definitions, Acronyms, and Abbreviations**

* **FRD**: Functional Requirements Document
* **JTBD**: Jobs To Be Done methodology
* **Q&A**: Question and Answer
* **API**: Application Programming Interface
* **UI**: User Interface
* **AI**: Artificial Intelligence
* **LLM**: Large Language Model
* **TBF**: To Be Fixed
* **TBD**: To Be Determined/Done
* **R**, **E, CS, AS, TSS, TCS, TS**: Various scores as defined in the Scores Calculation section

**3. System Overview**

The JTBD Interview Simulator is designed to provide a training platform for users who want to practice interviewing high-level executives of various businesses in order to improve their interview skills and also get some business insight mainly, but not exclusively, based on the JTBD methodology.  
The application uses AI LLMs to play 2 of the roles in the interviewing process:

* The interviewee (the high-level executive) by answering the interview questions
* The “Interview expert” (or evaluator) who evaluates the interview and provides feedback to the user (the interviewer).

See more on the various roles in the Appendix

**4. Functional Requirements**

The application includes the following modules:

**4.0 Introduction Module**

This module will give the user some overview of the application.

**4.0.1** **Description**

The welcome screen will be displayed as the first screen the user sees. It will include explanations about the application’s objectives, way of usage, output etc.

**4.0.2 Functional Requirements**

| **Requirement ID** | **Requirement Description** | **Priority** | **Status** |
| --- | --- | --- | --- |
| FR-0.1 | A welcome screen will be displayed to the user with the title “Welcome to the JTBD Interview Simulator”. A text explaining shortly various topics of the application will be displayed:  TBD | High | TBD |
| FR-0.2 | A green “Start the interview by selecting the desired options” button will be at the end of the explanation text. Clicking it will change the screen to the options selection screen. | High | TBD |

**4.1 Mode Selection Module**

This module will allow the user to select the desired options for the interview.

**4.1.1 Description**

There are 2 subjects for the user selection:

* The **business domain** of the company/organization the user wants to interview (out of 10 business domains)
* The **interview mode** –
  + **Full Interview Mode** - Complete a focused interview with comprehensive **post**-analysis
  + **Guided Interview Mode** - Learn and practice with **real-time** guidance and feedback

**4.1.2 Functional Requirements**

| **Requirement ID** | **Requirement Description** | **Priority** | **Status** |
| --- | --- | --- | --- |
| FR-1.1 | A screen for options selection will be displayed to the user | High | Done |
| FR-1.2 | On the screen’s top will be the title “JTBD Interview Simulator” | High | Done |
| FR-1.3 | The business domain selection will be displayed below the title with a text  “1. Select Business Domain” and under it a window field with the text “Select a business domain….” and a pull-down list, which will include the following domains:  Airline Operations  Education Technology  Hospitality Services  Healthcare Services  Retail & E-commerce  Financial Services  Software & Technology  Manufacturing  Logistics & Supply Chain  Telecommunications | High | Done |
| FR-1.4 | The interview mode selection will be displayed below the business domain selection by a text –  “2. Select Interview Mode” and below it 2 frames, side by side, to select by clicking on either of them, as the user selects. The text for each of them will be:  **Full Interview Mode**  Complete a focused interview with comprehensive post-analysis   * 30 questions limit * Natural conversation flow * Detailed post-interview analysis * Best for assessment & practice   **Guided Interview Mode**  Learn and practice with real-time guidance and feedback   * Real-time JTBD guidance * No question limit * Interactive learning experience * Best for learning & training | High | Done |
| FR-1.5 | Start button at the bottom of the screen. The button will be with the text: “Complete Selection to Start”. If the selection of the 2 options is not completed the button will stay in dark grey and once the selection is completed it will change to green and the text will change to “Start Interview” | High | Done |
| FR-1.6 | Clicking on the “Start Interview” will change the display to the interview screen according to the user’s mode selection. During the transition time the display will show a round line moving in a circle with the text: “Starting Interview….” above the line and “Please wait while we prepare your interview” below the line. | High | Done |

**4.2 Interview Module**

This module is responsible for providing the UI of the interview.

**4.2.1 Description**

The module will display the Interview screen in a **chat format**. This screen will be basically similar for both of the interview modes. The screen of the Guided Interview Mode will have a few changes as will be described in 4.2.2 below.

**4.2.2 Functional Requirements**

| **Requirement ID** | **Requirement Description** | **Priority** | **Status** |
| --- | --- | --- | --- |
| FR-2.1 | A screen for conducting the interview will be displayed to the user, according to the user’s mode selection, after selecting the options and clicking the “Start Interview” button. | High | Done |
| FR-2.2 | The title “JTBD Interview Simulator” will be displayed at the top left corner of the screen | Medium | Done |
| FR-2.3 | A questions counter will be displayed at the middle top of the screen:   * For the full mode: “Questions: {x}/30” when “x” will start from 0 and increase by 1 for each **answered** question until the end of the interview is ended by the user or a max of 30 questions. * For the guided mode: “Questions: {x}” when x will start from 0 and will increase by 1 for each **answered** question until the end of the interview. | High | Done |
| FR-2.4 | A blue “Start New Interview” will be at the top of the screen on the right side of the question counter. Clicking this button will display a confirmation window. | High | Done |
| FR-2.5 | Confirmation pop-up window will be displayed after clicking the “Start New Interview” with the text:  “Are you sure you want to start a new interview? The current information will be lost.”  The user will see a green “Yes” button and a red “No” button.  Clicking the “Yes” button will display the options selection screen and in the transition time the display will show a round line rotating in a circle with the text: ”Loading new interview…” below the rotating line.  Clicking the “No” button will remove the confirmation window and keep the ongoing interview screen. | High | TBF |
| FR-2.6 | A red “Finish Interview” button will be at the top of the screen on the right side of the “Start New Interview” button. Clicking this button will display a confirmation window. | High | TBF |
| FR-2.7 | Confirmation pop-up window will be displayed after clicking the “Finish Interview” with the text:  “Are you sure you want to end the interview?”  The user will see a green “Yes” button and a red “No” button.  Clicking the “Yes” button will display the JTBD Interview Analysis screen (as defined below).  Clicking the “No” button will remove the confirmation window and keep the ongoing interview screen. | High | Done |
| FR-2.8 | A window for the interview script will be positioned below the title and the buttons described above. This window’s initial content will include the interviewee presentation of him/herself (as defined below). Then, when a question is asked it will appear in this window waiting for the answer. It will be with a row space from and indented relative to the previous interviewee’s text. When the answer arrives it will be displayed below the question. | High | Done |
| FR-2.9 | A window for entering the questions will be positioned below the script window. | High | Done |
| FR-2.10 | A green “Send” button will be positioned on the right side of the questions window. Clicking it will send the question to the interviewee and show it in the script window. Sending the question can also be done by pushing the “Enter” key on the keyboard. | High | Done |
| FR-2.11 | **Only in the guided mode:**  A grey toggle button will be positioned below the “Start New Interview” and “Finish Interview” buttons. Its text will be “Show Progress Evaluation”. The button will be active only after the 3rd question is **answered** and then it will change its color to blue. Clicking it will display the “JTBD Progress Interview Analysis” screen (as defined below) with its relevant information showing the evaluation of the interview until clicking the toggle button. | High | TBF |
| FR-2.12 | Below the toggle button will be displayed a notification saying: “Analysis will begin after the 3rd question is answered” | Medium | TBF |
| FR -2.13 | **Only in the full mode:**  Automatic ending of the interview will happen when the 30th question is answered (when the questions counter shows “30/30”). At this point the application will display a message “You reached the maximum number of questions. Go to the interview analysis by clicking the “Finish Interview” button.  The ”Send” button will be deactivated. | Medium | TBD |
| FR -2.14 | The interviewee and the answers should be relevant to the business domain selected by the user. Apart from verbal answers, non-verbal behavior should also be displayed in [ ] as part of each answer. | High | Done |
| FR -2.15 | Interviewee presentation of him/herself at the opening interview screen:  “Hello! I'm {interviewee name}, {interviewee role in the company/organization} of {name of the company/organization}. I have about 1 hour for this conversation. What would you like to discuss?” | High | TBF |

**4.3 Evaluation Module**

This module is responsible for providing the user the analysis of the interview.

**4.3.1 Description**

The module will display the evaluation (also referred to in this document as “analysis”) screen. This screen will be the same for both of the interview modes. The screen of the Guided Interview Mode will have a few changes as will be described in 4.3.2 below.

**4.3.2 Functional Requirements**

| **Requirement ID** | **Requirement Description** | **Priority** | **Status** |
| --- | --- | --- | --- |
| FR-3.1 | A screen displaying the interview’s evaluation will be displayed to the user, according to the user’s mode selection:   * In the full mode - after clicking the “Yes” button in the confirmation window, which pops up after clicking the “Finish Interview’ button. This screen will display the overall full interview evaluation (as defined below). * In the guided mode –   + - After clicking the toggle button and after 3 questions were answered. The screen displayed in this case, which is a progress evaluation screen, will be in the exact same structure and look as the full mode final analysis screen except for some changes as described below.     - After clicking the “Yes” button in the confirmation window, which pops up after clicking the “Finish Interview” button. This screen will be exactly as the overall full interview evaluation of the full mode and **will actually include the content of the last progress evaluation created after the last answered question**.   This requires that the progress evaluation will be performed after each answered question, starting from the 3rd one, independently on whether or not the user clicked the toggle button (meaning - even if the user did not click the toggle button). | High | TBF |
| FR-3.2 | The title “JTBD Interview Analysis” will be displayed at the top of the screen | High | Done |
| FR -3.3 | A questions counter will be displayed below the title at the right side of it, showing the number of questions asked **and answered** during the interview. | High | Done |
| FR -3.4 | A minutes’ counter will be displayed below the title at the left side of it, showing the duration of the interview in minutes. | High | Done |
| FR -3.5 | Below the counters will be displayed an **Overall Performance** score: “{TS}/100”, when “TS” is the Total Score – the accumulated scores of the 2 categories’ scores:   * “Interview Skills: {TCSi}/50”, when the “TCSi” is Total Category Score of the Interview Skills category – the accumulated scores of the 4 sub-categories scores:   + “Question technique: {TSSq}/15”   + “JTBD framework: {TSSj}/15”   + “Progress forces: {TSSp}/10”   + “Interview management: {TSSi}/10”   When the various TSS are the Total Sub-category Score of each of them, calculated as defined in the Appendix   * “Business Insights: {TSSb}/50”, when the “TCSb” is Total Category Score of the Business Insights category – the accumulated scores of the 4 sub-categories scores:   + “Market opportunity: {TSSm}/15”   + “Innovation: {TSSv}/15”   + “Customer segment: {TSSc}/10”   + “Strategic: {TSSg}/10”   When the various TSS are the Total Sub-category Score of each of them, calculated as defined in the Appendix  All the values in {} are calculated scores based on raw scores given by the expert evaluating the interview (by the AI LLM) as defined in the Appendix.  Below the overall score will be text: “Overall Performance” | High | Done |
| FR -3.6 | Below the overall performance score will be displayed, side by side, the 2 categories scores:  “Interview Skills {TCSi}/50” and the “Business Insights {TCSb}/50”. | High | Done |
| FR -3.7 | Below each of the category scores will be a text: “Show Details”, which when clicked will show the scores of its sub-categories.  When the sub-categories scores are shown, this text will change to “Hide Details”, which when clicked will close the list of the sub-section scores. | High | Done |
| FR -3.8 | Below the scores area will be the window for the key findings to be listed. The text will be: “Key Findings”. | High | Done |
| FR -3.9 | Below the key findings window will be the window for theinterview strengths to be listed in green color. The text will be: “Interview Strengths”. | High | Done |
| FR -3.10 | Below the interview strengths window will be the window for the areas for improvement to be listed in red color. The text will be: “Areas for Improvement”. | High | Done |
| FR -3.11 | Below the areas for improvement window will be the window for the recommended follow-up questions to be listed in blue color. The text will be: “Recommended Follow-up Questions”. | High | TBF |
| FR -3.12 | **Only in the end report of both modes. Not relevant to the progress analysis screen in the guided mode**.  Below the recommended follow-up questions window will be the window for the interview transcript to be displayed. The text will be: “Interview Transcript”. | High | TBF |
| FR -3.13 | **Only in the end report of both modes. Not relevant to the progress analysis screen in the guided mode**.  Below the interview transcript window will be 2 buttons:   1. “Start New Interview” (green) – clicking it will load a confirmation window (see below) 2. “Download Report” (purple) – clicking it will create and download a PDF file which includes all the information in the evaluation screen and some more as described below. | High | TBF |
| FR -3.14 | **Only in the guided mode.**  A blue toggle button will be displayed at the same position of this button in the interview screen of the guided mode.  Its text will be “Show Interview”. Clicking it will display the “JTBD Interview Simulator” at the point the user clicked the toggle button to view the progress evaluation. | High | TBF |
| FR -3.15 | The output report will be created in a PDF format and include:   * All the information in the final analysis screen including the interview script * Date and time * The business domain * The company/organization name * The interviewee’s name and position | High | TBF |
| FR -3.16 | The numerical evaluation process will be performed after each Q&A pair, evaluating ONLY the last Q&A pair and appending its RAW scores to the previous RAW score and re-calculating the other required scores as described in the Appendix. |  |  |

**5. Non-Functional Requirements**

**5.1 Environment**

**5.1.1 Platform**

The application will be developed by using either Flask (using Python) or Google Apps Script.

**5.1.2 LLM**

The LLM which will be used is OpenAI **GPT 4o**. The required API Key will be saved by a safe mechanism to avoid an misuse of it (as a property in Google Apps Script or another way if using Flask).

**5.2 Background story**

For each of the interviewees, of any given business domain, a short background story should be created by the LLM, which will tell in a few sentences what’s its business, its size, location, markets it serves, description of resources (number of employees, machinery, operational sites, branches etc.) volume of revenue, etc. which should be consistent and referred to as fit in the interview.

**5.3 Usability**

The interface must be user-friendly and easy to navigate.

**6. Evaluation**

**6.1 Framework**

The evaluation should be based on the following core sources

* Clayton Christensen's "Competing Against Luck" - Interview methodologies
* Bob Moesta's "Demand-Side Sales" - Interview techniques
* Alan Klement's "When Coffee and Kale Compete" - Customer interviewing
* Intercom's JTBD Interview Guide
* Strategy's ODI Interview Methods

**6.2 Evaluation Components**

**6.2.1 Interview Skills Evaluation** (50% of total analysis)

**a. Question Technique & Structure**  (15%)

- Job Exploration Quality (5%)

* Using "why" effectively
* Avoiding leading questions
* Maintaining focus on the job, not the solution

- Timeline Navigation (5%)

* First-time usage exploration
* Last-time usage details
* Change triggers identification

- Follow-up Effectiveness (5%)

* Diving deeper at right moments
* Clarifying ambiguous responses
* Exploring unexpected angles

**b. JTBD Framework Application** (15%)

- Functional Job Discovery (5%)

* Uncovering core tasks
* Understanding process steps
* Identifying success metrics

- Emotional/Social Insight (5%)

* Exploring feelings and anxieties
* Understanding social context
* Uncovering status/image factors

- Circumstance Mapping (5%)

* Identifying situational triggers
* Understanding environmental factors
* Exploring causal conditions

**c. Progress Forces Exploration** (10%)

- Push Factor Investigation (2.5%)

* Current solution problems
* Pain points identification
* Frustration exploration

- Pull Factor Discovery (2.5%)

* Desired improvements
* Attraction to alternatives
* Ideal outcomes

- Anxiety/Habit Understanding (2.5%)

* Current behavior patterns
* Change resistance
* Risk perception

- Competition Analysis (2.5%)

* Alternative solutions
* Trade-off exploration
* Decision criteria

**d.** **Interview Management**  (10%)

- Conversation Flow (5%)

* Natural progression
* Appropriate pacing
* Smooth transitions

- Active Listening (2.5%)

* Reflection techniques
* Understanding verification
* Non-verbal cue recognition

- Executive Context Awareness (2.5%)

* Business context sensitivity
* Time management
* Professional rapport building

**6.2.2 Business Insight Analysis** (50% of total analysis)

**a. Market Opportunity Identification**  (15%)

- Unmet Needs Discovery (5%)

* Explicit pain points
* Implicit frustrations
* Workarounds used

- Market Gaps (5%)

* Underserved needs
* Competitive weaknesses
* Service/product limitations

- Growth Potential (5%)

* Market size indicators
* Scaling opportunities
* Cross-selling possibilities

**b. Product/Service Innovation Insights**  (15%)

- Feature Prioritization (5%)

* Must-have capabilities
* Nice-to-have features
* Unnecessary elements

- Value Proposition Enhancement (5%)

* Current value drivers
* Missing value elements
* Differentiation opportunities

- Innovation Opportunities (5%)

* New product possibilities
* Service expansion areas
* Integration needs

**c. Customer Segment Understanding**  (10%)

- Segment Characteristics (5%)

* Usage patterns
* Decision criteria
* Value sensitivity

- Behavioral Insights (2.5%)

* Adoption barriers
* Usage triggers
* Loyalty factors

- Journey Mapping (2.5%)

* Decision process
* Usage lifecycle
* Switch triggers

**d. Strategic Recommendations**  (10%)

- Short-term Actions (5%)

* Quick wins
* Immediate fixes
* Low-hanging fruit

- Medium-term Initiatives (2.5%)

* Product development
* Service enhancement
* Process improvement

- Long-term Strategy (2.5%)

* Market positioning
* Innovation roadmap
* Competitive advantage

**Appendix**

The appendix gives some more details on some topics of the requirements.

1. **Roles**
   1. **The User** (the interviewer)
      1. The User is an entrepreneur, who intends to provide a service or a product to a business, gain a deep understanding of the needs and motivations of the business owners in various lines of business, using the Jobs to Be Done (JTBD) methodology. The User is the person who conducts an interactive interview with virtual characters that respond dynamically based on the conversation, incorporating non-verbal cues to enhance insights.
   2. **The Business Executive** (the interviewee)
      1. This role is played by the LLM. The various personas, one for each of the optional business domains, are to be set in the code and one of them will be presented to the User according to the selected business domain.
      2. Setting a persona in the code:
         1. Each persona will be set with a few key information items:

* Name
* Position
* Company name
* Details - of the position for this company
* Style - of the persona’s in performing the position
* Focus - in performing the position
* Background - one-liner business description
  + - 1. You are {Name}, the {Position} of{Company name}.

You lead a {Details}.

Your communication style is {Style} and you are:

* Focused on {Focus}.
* Deeply knowledgeable about your industry
* Open to innovation but practical about implementation
* Proud of your company's achievements
  + - 1. Include realistic non-verbal cues in [brackets] in your responses, such as:
* [leans forward] - when interested
* [checks phone quickly] - when distracted
* [nods thoughtfully] - when considering
* [raises eyebrows] - when skeptical
* [smiles warmly] - when engaged
* [crosses arms] - when defensive
  + 1. Background context: <One liner business description>.
  1. **The Expert** (the evaluator)
     1. This role is played by the LLM. The LLM plays as an expert evaluator trained in Christensen's, Moesta's, and Klement's methodologies. The Expert gives its evaluation in 2 ways:
        1. Numerical scores – as described in “Scores Calculations” below
        2. Verbal feedback as described in “Additional Feedback” below

1. **Evaluation**

Evaluate each **Q&A pair** for relevance to any of the following categories and subcategories:

* 1. Interview Skills
     1. Question Technique
     2. JTBD Framework
     3. Progress Forces
     4. Interview Management
  2. Business Insight
     1. Market Opportunity
     2. Innovation
     3. Customer Segment
     4. Strategic

Rate each Q&A pair and provide evidence for:

* 1. Relevance score between 0 and 1 (0 for not relevant at all and 1 for highly relevant):
     1. How relevant is this Q&A to any of the subcategories?
     2. List only the subcategories for which the relevance score is higher than 0.3
  2. Effectiveness score between 0 and 5 (0 for not effective at all and 1 for excellent/comprehensive application):
     1. How well does it follow JTBD principles?
  3. Evidence: Quote specific parts showing JTBD application.
  4. **Additional Feedback**
     1. Include in all evaluations additional feedback in each of the following sections:
        1. Key Findings
        2. Interview Strengths
        3. Areas for Improvement (of the interview to get better results)
        4. 2-3 Recommended Follow-up Questions
  5. **Scores Calculations**
     1. Raw scores (per Q&A pair):
        1. R = Relevance score from 0 to 1
        2. E = Effectiveness score from 0 to 5
     2. Calculated Score (per Q&A pair):
        1. CS = R\*E (should be a number between 0 to 5)
     3. Aggregate Score (of all the Q&A pairs in each subcategory):
        1. AS = Average of the all the Calculated Scores of all the Q&As in a subcategory up and including the last Q&A pair (should be a number between 0 to 5)
     4. Total Subcategory Score:
        1. TSS = AS/5\*Max points of the subcategory (should be a number between 0 to the maximum for the subcategory)
     5. Total Category Score:
        1. TCS = the sum of all the TSS of the category (should be number between 0 to 50)
     6. Total Score:
        1. TS = The sum of the 2 TCS (should be number between 0 to 100)
  6. **Evaluation Timings**
     1. Full interview mode:
        1. At the end of the interview, considering the whole interview’s Q&A pairs.
     2. Guided interview mode:
        1. Start with the 3rd Q&A pair as the baseline. Evaluate the first three pairs.
        2. After each new Q&A pair (starting with the 4th Q&A pair) - update the evaluation based on all the completed Q&A pairs so far.
        3. The final evaluation at the interview end will be the last evaluation performed after the last Q&A pair.