|  |  |  |  |
| --- | --- | --- | --- |
| **Work Package 1** | | | |
| **Title:** Market Research | **Duration:** January-February | | **Leader:** Julius McGee |
| **Objectives:** Analyze customer needs, pain points and current trends amongst the 50+ Demographic. | | | |
| **Key question(s) to confirm technical feasibility:** 1. When the product goes live, how will this 50 plus market feel when interacting with Jortty? 2. Regarding functionality, how can our technology create and simplify the process of validating scam emails and providing those results that’s easy to access? | | | |
| **Key question(s) to confirm commercial feasibility:** 1. Being that there is currently no service that functions like the one we are setting forth, what challenges will Jortty face when announcing the services? 2. How will Jortty stay ahead of the curve and combat copy cats? | | | |
| **Description of work/Tasks:** | | **Milestones:** | |
| **T1.1:** Analyze target demographic’s needs & pain points as it relates to technology. In order to truly design and develop our platform, we need to understand the psychology of our demo and how they are currently interacting with technology. | | **M1.1:** Completed in-depth market analysis on consumer’s pain points. | |
| **T1.2:** Study competitors and their current offerings in order to get a better handle on how they currently operate i.e. services, pricing, and technology. Being that the tech industry has low barriers to entry, we need to get a better understanding of how Jortty will establish itself as leader in the AI Tech space and be prepared for the competitors that have funding try to adapt and add our services to their wheelhouse. | | **M1.2:** Completed competitor analysis and identified the key players and in direct competition with Jortty. | |
| **T1.3:** Identify trends and emerging technologies. This is crucial as it will assist Jortty in identifying new emerging technology that can assist with development and develop a product that is future proofed. | | **M1.3:** Identified any new emerging trends that have a positive or negative effect on our technology solution. | |
| **T1.4:** Identify privacy and security barriers and establish how we will navigate this challenge as it relates to ensuring the privacy of Jortty’s users. This is crucial because we are asking a demo that does not feel comfortable trusting tech companies because of cybercrime, so we need to ensure that our solution not on functions well, but is in compliance. | | **M1.3:** Completed research and identified how customer’s privacy concerns will be answered with the implementation of robust encryption methods. | |
| **Equipment, facilities, and resources** | | | |
| Key People: Julius McGee, Riley Murray, Ryan Allen, Samuel Paniagua  R&D software: Statista, AARP, Google Scholar, Gartner | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Work Package 2** | | | |
| **Title: AI Model Development** | **Duration:** February-March | | **Leader:** Julius McGee |
| **Objectives:** Identity data sets and pre-trained models for testing. | | | |
| **Key question(s) to confirm technical feasibility:** 1. Will Jortty be able to utilize any pre-trained NLP models to assist in enhancing accuracy and reducing bias. 2. Is there a database of spam/scam emails that we can utilize to start the process of fine-tuning? 3. What frameworks currently exist that will assist Jortty in future proofing our platform? | | | |
| **Key question(s) to confirm commercial feasibility:** As we are considering two primary models for scam detection: a classification model and a transformers-based model, which one will be better suited for this project? | | | |
| **Tasks:** | | **Milestones:** | |
| **T2.1:** Research the advantages and disadvantages of using a classification model or transformer-based model for the email scam detection. | | **M2.1:** Confirmed the primary model for scam detection. | |
| **T2.2:** Collect and preprocess data for training and validation. We will also need to create a dialogue flow and conversation scripts. | | **M2.2:** Solidified the amount of data needed for testing. | |
| **T2.2:** We need to research and select suitable algorithms and frameworks to ensure that we have are optimized for accuracy and performance. | | **M2.3:** Solidified the frameworks and algorithms need for the AI tech concierge and Email scam detection. | |
| **T2.3:** Develop and integrate Natural Language Processing (NLP) capabilities for tech support, and scam detection. | | **M2.4:** Confirmed the ensemble of NLPs models worked for both tech help queries, request and email scam detection. | |
|  | |
| **Equipment, facilities, and resources** | | | |
| Key People: Julius McGee, Riley Murray, Samuel Paniagua  Software: OpenAI API, Github, TBA | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Work Package 3** | | | |
| **Title:** System Architecture Design | **Duration:** March-April | | **Leader:** Julius McGee |
| **Objectives:** Solidify the tech stack and architecture | | | |
| **Key question(s) to confirm technical feasibility:** How do we confirm that our tech stack is scalable and deliver an efficient user experience? How will our tech stack allow us to stay competitive against key players in the industry? | | | |
| **Key question(s) to confirm commercial feasibility:** What new emerging technologies are there that can assist scaling? | | | |
| **Tasks:** | | **Milestones:** | |
| **T3.1:** Design a scalable and secure system architecture. | | **M3.1:** Designed Tech stack to be used and researched other emerging technologies to ensure that we could migrate easily, if needed. | |
| **T3.2:** Choose appropriate technologies for frontend, backend, and databases for scalability. | | **M3.2:** Confirmed the technology stacked to be used that will ready us for scaling and offer the highest security measures. | |
| **Equipment, facilities, and resources** | | | |
| Key People: Julius McGee, Samuel Paniagua  Software: TBA | | | |
|  | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Work Package 4** | | | |
| **Title: Prototype Development** | **Duration:** May-June | | **Leader:** Julius McGee |
| **Objectives:** Develop the prototype, train, and optimize AI Tech Concierge. | | | |
| **Key question(s) to confirm technical feasibility:** How will our prototype respond to non-technical queries? What is the speed and accuracy of the answers? | | | |
| **Key question(s) to confirm commercial feasibility:** 1. Considering the phases from research to development, how fast would our competitors be able to go to market after we launch? | | | |
| **Tasks:** | | **Milestones:** | |
| **T1.1:** Train the chatbot on sample conversations and data sets. | | **M1.1:** Confirmed data sets and sample conversation’s implementation. | |
| **T1.2:** Refine the chatbot's responses and behavior based on feedback. We have to run several internal tests in order to fine tune its responses. | | **M1.2:** After solid testing, we confirmed that the fine tuning of the AI responses are more accurate than the initial phase. | |
| **T1.3:** Optimize the AI’s NLP capabilities to ensure accurate understanding and response to user inquiries. | | **M1.3:** | |
|  | |
| **Equipment, facilities, and resources** | | | |
| Key People: Julius McGee, Samuel Paniagua  Software: TBA | | | |
| **Work Package 5** | | | |
| **Title: Performance Testing & Optimization** | **Duration:** May-June | | **Leader:** Riley Murray |
| **Objectives:** Test out the prototype with selected users and gather feedback. | | | |
| **Key question(s) to confirm technical feasibility:** 1. Does the AI model provide precise answers to only tech queries? 2. How accurate and fast are the results for answers to queries? 3. What is the level of accuracy of detecting scam emails? | | | |
| **Key question(s) to confirm commercial feasibility:** 1. Does the AI model answer to non-tech related question? 2. Is the level of accuracy sufficient enough for the masses? 3. Are we able to experience the deep neural networks? | | | |
| **Tasks:** | | **Milestones:** | |
| **T1.1:** Conduct comprehensive testing to ensure AI’s functionality and performance | | **M1.1:** | |
| **T1.2:** Deploy the AI on the desired platform(s) | | **M1.2:** | |
| **T1.3:** Monitor usage and gather user feedback for future improvements | | **M1.3:** | |
| M1.4: | |
| **Equipment, facilities, and resources** | | | |
| Key People: Julius McGee, Riley Murray, Ryan Samuel Paniagua  Software: TBA | | | |

**Gantt Chart**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Janurary**  **1** | **February**  **2** | **March**  **3** | **April**  **4** | **May**  **5** | **June**  **6** | **July**  **7** | **M**  **8** | **M**  **9** | **M**  **10** | **M**  **11** | **M  12** |
| 1.1 Subtask title |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.2 Subtask title |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.3 Subtask title |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.1 Subtask title |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.2 Subtask title |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.3 Subtask title |  |  |  |  |  |  |  |  |  |  |  |  |
| 3.1 Subtask title |  |  |  |  |  |  |  |  |  |  |  |  |
| 3.2 Subtask title |  |  |  |  |  |  |  |  |  |  |  |  |
| 3.3 Subtask title |  |  |  |  |  |  |  |  |  |  |  |  |
| 4.1 Subtask title |  |  |  |  |  |  |  |  |  |  |  |  |
| 4.2 Subtask title |  |  |  |  |  |  |  |  |  |  |  |  |