**PRODUCT ROADMAP: Quantum Pulse**

**TIMELINES:**

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| **Header** | **Dates** |
| **Innovation Days** | September 11th 2023 – November 3rd 2023 |
| **Solution Review 1** | November 8th 2023 |
| **Solution Review 2** | November 9th 2023 |

1. **Project Kick-off and Data Preparation: (11th September to 24th September)**

* Project kick-off and requirement gathering.
* Data collection and preparation, ensuring that the CSV data is clean, structured, and contains the necessary headers.

1. **NLP model selection and setup: (25th September to 8th October)**
   * Consider using a pre-trained model like TAPAS, or GPT-3 using either AWS or Google Collab.
   * Fine-tuning the model on your investment data, defining query formats and response templates.
2. **Local Model Deployment: (9th October to 22nd October)**
   * Local Model Deployment**.**
   * Developing a REST API using Flask or FastAPI to serve the NLP model locally.
3. **Testing: (23rd October to 29th October)**
   * Testing the model's functionality locally, ensuring it can handle queries and provide responses.
4. **Final Phase: (29th October onwards):**

* Designing and developing the dashboard with input fields, auto-suggestions, and a submission button. (*if time permits*)
* Testing the end-to-end system, ensuring that queries return accurate results and are displayed correctly.
* Extensive testing, including user testing, edge case testing, and performance testing.

**PRODUCT DECK BRIEF BULLETS:**

**1. Introduction (2 minutes)**

* Briefly introduce Quantum Pulse and the team.
* Explain the need for Quantum Pulse, highlighting the challenges in querying investment product data manually through VIFI or Athena.

**2. Problem Statement (2 minutes)**

* Define the problem you are addressing: the difficulty in efficiently querying and retrieving investment product data.

**3. Solution Overview (3 minutes)**

* Present your NLP-based investment product query system as the solution. (Based on TAPAS)
* Explain how the system will make querying and retrieving data easier and more efficient.
* Highlight the key features and benefits.

**4. Technical Architecture (3 minutes)**

* Provide an overview of the technical components:
  + Data source (CSV with headers)
  + NLP model (TAPAS)
  + Local deployment
  + Cost Associated with training for 600 funds of data (insights through AWS Costs)
* Explain how these components interact to deliver the desired functionality.

**5. NLP Model (TAPAS) (4 minutes)**

* Describe the NLP model's key components, such as natural language understanding and data parsing, **Masked language modeling (MLM).**
* Mention the tools and libraries used for model development. *(maybe too technical)*
* Discuss the model's adaptability to new data formats and classifications.

**6. Demonstration (2 minutes)**

* Give a brief live demonstration of the system:
  + Show how to input a query.
  + Display how the system responds with relevant results.

**7. Data Source and Classification (2 minutes)**

* Explain the data source (CSV with headers) and its role in training and updating the model.
* Discuss how additional data columns can be used to expand the model's capabilities.

**8. Challenges and Future Work (1 minute)**

* Acknowledge any challenges faced during development.
* Outline potential future enhancements or features and how this can benefit the product owners.

**9. Benefits and Impact (2 minutes)**

* Discuss the potential benefits of the system, such as time savings, cost usage and improved decision-making.

**10. Q&A (3 minutes)**

* Open the floor for questions and answers.

**11. Conclusion (1 minute)**

* Summarize the key takeaways from your presentation.
* Reiterate the significance of your NLP-based solution in addressing the problem.