

INTRODUCTION AND PROJECT OVERVIEW

Project Athena (Transition Path):

- **Main Goal:** Codify BroadScope meetings and other team interactions (specifically, Data Mine team meetings on Teams).
- **Purpose:**
 - Develop analytics and summaries of the meetings.
 - Extract key knowledge from expert testimonies within those meetings.
 - Facilitate effective knowledge transfer to successor teams/individuals .
- **Data Source limitation**
 - Limited to BroadScope's and Teams meetings of the Data Mine Team.
 - Data security was ensured by utilizing a local LLM and ensured OpenAI and Gemini API doesn't use data for training.
- **Future Expansion (Potential Second Project):**
 - Generalize the methods developed in Athena to cover other industries beyond the initial scope.
- **Improve exiting conditions**
 - Enable detailed and informative data analysis, currently analysis is done manually.



DASHBOARD

- **Vision/Goal:**
 - Visualize BroadScope meeting data through multiple AI-generated responses.
 - Provide varying responses with different levels of accuracy to offer diverse perspectives.
- **Features:**
 - **AI-Powered Summarization:** Multiple AI-generated responses summarizing BroadScope content.
 - **User Authentication:**
 - Login/Sign-up functionality.
 - Security measures to protect user data.
- **Structure:**
 - **Backend:**
 - Core logic implemented using Llama, OpenAI API, and Gemini.
 - **Frontend:**
 - User interface built with Node.js and React.js.
 - **Database:**
 - Storage for user information (e.g., login credentials, potentially user preferences or saved analyses).
 - Database Type: **Neon** (This clarifies the specific database technology).



LLM (LARGE LANGUAGE MODEL)

- **Custom Model Training** – Utilized OpenAI and Gemini API, and Ollama to train a Small Language Model (SLM) for company and employee data retrieval.
- **Hybrid Approach** – Integrated both OpenAI's powerful API and Ollama's on-device processing for balanced performance and efficiency.
- **Optimized Data Processing** – Designed to efficiently pull and analyze structured and unstructured company records.
- **Enhanced Query Handling** – Fine-tuned to understand and respond accurately to company-specific queries.
- **Secure & Scalable** – Built with data privacy considerations and scalability for future growth.

```
2 import docx
3 import chromadb
4 from langchain_openai import ChatOpenAI
5 from langchain_core.prompts import ChatPromptTemplate
6
7 # HARDCODED PATH - Set your document path here
8 DOCUMENT_PATH = "/Users/deepanshsaxena/Downloads/hello.docx"
9
10 # Function to extract text from Word documents
11 def extract_text_from_docx(file_path):
12     doc = docx.Document(file_path)
13     full_text = []
14     for para in doc.paragraphs:
15         full_text.append(para.text)
16     return '\n'.join(full_text)
17
18 # Function to upload a document to the collection
19 def upload_document():
20     file_path = DOCUMENT_PATH # Use the hardcoded path
21
22     # Check if the file is a Word document
23     if not file_path.endswith('.docx'):
24         print("Error: Please provide a .docx file")
25         return False
26
27     # Check if file exists
28     if not os.path.exists(file_path):
29         print("Error: File (file_path) not found")
```

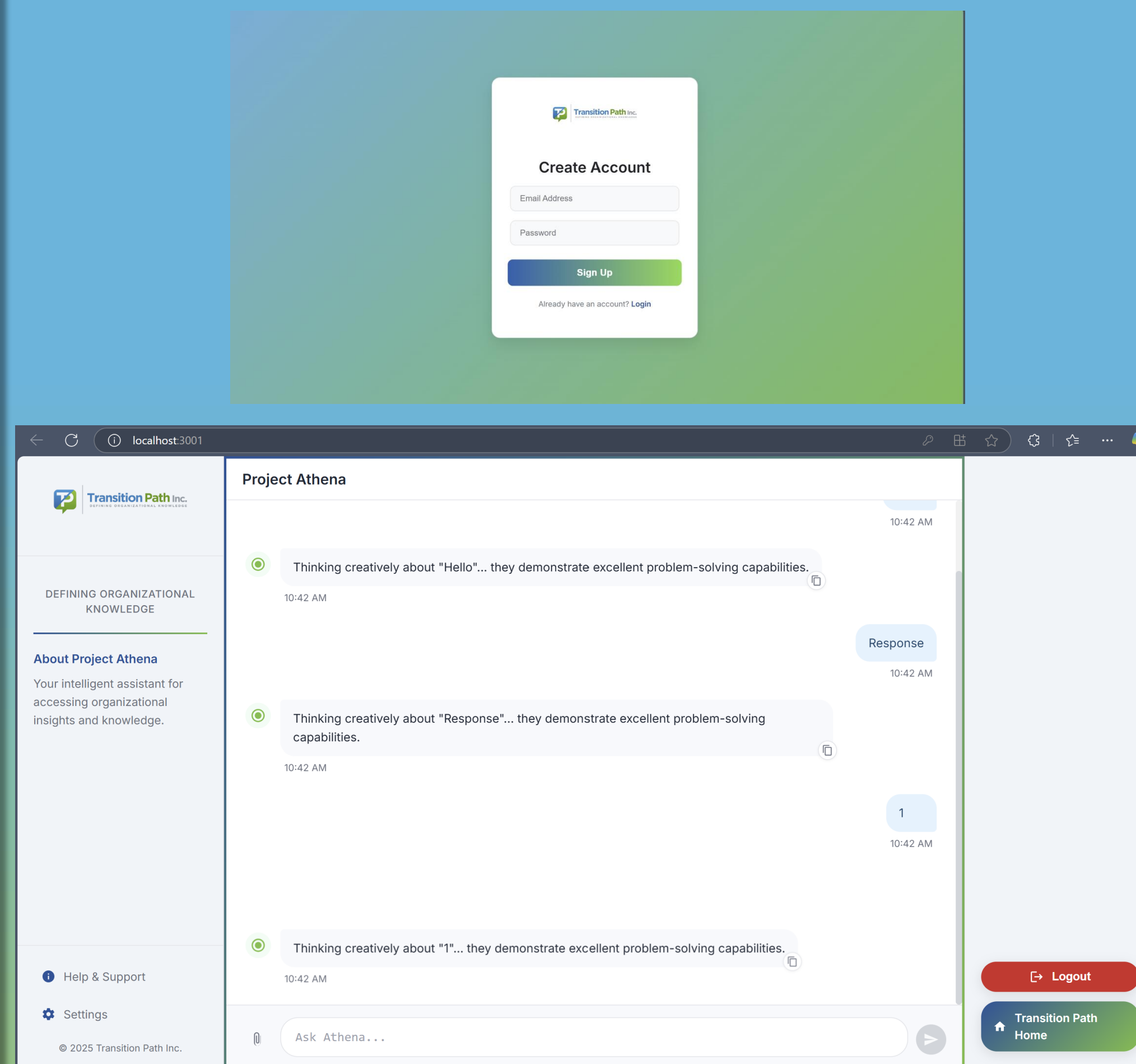
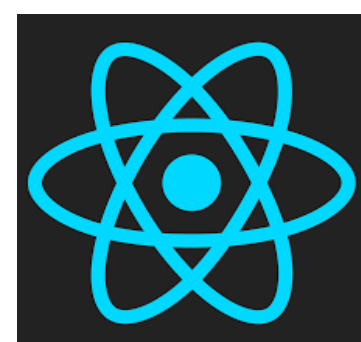
RESEARCH METHODOLOGY

Dashboard Research

- Frontend (Node.js & React.js):
 - Evaluated frameworks based on familiarity, community support, and suitability for interactive dashboards.
 - Selected Node.js and React.js due to team experience, skills, and project requirements.
- User Authentication & Security:
 - Researched best practices for user authentication and authorization.
 - Planned for basic login/sign-up, including security measures like password hashing and secure storage.

LLM Research

- Evaluated OpenAI, Gemini API, and Ollama for model accuracy, speed, and on-device processing capability.
- Developed a lightweight, local Small Language Model (SLM) for secure internal knowledge retrieval.
- Fine-tuned the model using anonymized meeting data to improve query relevance and summarization quality.
- Designed with scalability and privacy in mind to support future deployment.



CONCLUSION AND FUTURE GOALS

We were able to successfully build a working language model that automated some of their business methods to make it easier for clients to interact with previous employee internal knowledge. Taking into consideration their privacy concerns, BroadScope capabilities, and other specific needs, our application can be scaled and published to clientele in just a few steps.

Future Goals:

- **Fine-tuned on company-specific knowledge** to ensure relevant, context-aware responses using internal documents and expert interviews.
- **Integrated with a vector database** for fast, accurate retrieval of legacy knowledge during employee transitions.
- **Deployed as a secure, scalable backend** using cloud infrastructure with role-based access and data privacy safeguards.
- **Seamlessly connects to internal tools** (e.g., Slack, SharePoint) to embed into daily workflows and maximize usability.
- **Continuous learning from user feedback** to improve accuracy, reduce hallucinations, and evolve with organizational knowledge.

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