Project Building Experience Document

Introduction

The development journey of the Admission Chatbot project has been both enriching and challenging. Throughout the process, I encountered several obstacles that significantly contributed to my learning and problem-solving abilities.

Challenges Faced

1. Import Issues - Absolute and Relative

Navigating and resolving import issues, particularly understanding the nuances of absolute and relative imports, presented an initial hurdle. Addressing these challenges demanded a comprehensive grasp of project structure and Python's import system.

2. Lack of Backend Integration Knowledge

The lack of expertise in integrating the chatbot project with a backend server posed a substantial roadblock. Understanding the intricacies of backend technologies and establishing a seamless connection between the frontend and backend proved challenging.

3. UI Integration

Incorporating a user interface into the project introduced complexities in terms of frontend-backend coordination. Ensuring a smooth user experience during API calls and displaying responses required a deep understanding of both frontend and backend technologies.

4. Clashing Dependencies

Managing dependencies across different components of the project often resulted in version clashes. Resolving version conflicts and ensuring compatibility added an extra layer of complexity to the project.

5. Model Selection and Dataset Creation

Finding the right pre-trained model and manually creating a dataset for training the chatbot presented significant challenges. The process involved exploring various models on platforms like GitHub and crafting a dataset that accurately represents the intent categories.

6. UI Development Hurdles

Integrating a user interface proved to be challenging due to a lack of experience in frontend development. Implementing a visually appealing and user-friendly

interface required overcoming hurdles in HTML, CSS, and JavaScript.

Learning and Exploration

Despite the challenges, this project provided an excellent opportunity for learning and exploration:

1. GitHub Exploration

Exploring GitHub repositories to find the required models and resources expanded my knowledge and exposed me to different coding styles and project structures.

2. Enhanced Problem-Solving Skills

The difficulties faced during integration and dependency management enhanced my problem-solving skills, requiring a combination of research, experimentation, and effective debugging.

3. Understanding APIs

Struggling with backend integration deepened my understanding of API design and the interaction between frontend and backend components. It highlighted the importance of a cohesive architecture for seamless communication.

4. Frontend Development Exposure

While grappling with UI development, I gained exposure to frontend technologies, improving my understanding of HTML, CSS, and JavaScript.

5. Project Structure

Working on this project improved my understanding of creating a well-organized project structure, emphasizing the importance of modularization for code maintainability.

6. Model Selection and Dataset Preparation

Challenges in model selection and dataset creation reinforced the importance of understanding natural language processing principles. It encouraged critical thinking about the quality and diversity of data for effective model training.

Conclusion

In conclusion, the obstacles faced during the project building period, including the inability to provide a user interface, were instrumental in my growth as a developer. The hands-on experience with real-world challenges, exploration of GitHub, and learning through problem-solving have made this project an

exciting and invaluable learning experience. While there were difficulties, the satisfaction of overcoming each hurdle and building a functional admission chatbot has made it all worthwhile.