AI Course

Capstone Project   
Action Plan

For students (instructor’s review required)

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| Course | AI Course |
| Team Name | AI01 - 01 |
| Team Leader/  Members | Vuong Minh Khanh /  Hua Quang Dat, Tran Thi Quynh Dung, Phung Trung Hieu |
| Project Title | Sales Consulting ChatBot |
| Goal |  |
| The immediate goal is to understand the background knowledge of artificial intelligence and advanced Large Language Models (LLM) with ChatGPT, as a basis for research and analysis of AI chatbot achievements and products. The focus is on research on interactivity and accuracy in providing information, followed by testing and application to optimize the effectiveness of language models in real-life environments. | |
| Abstract |  |
| In an increasingly competitive business environment, businesses are looking for Unique Selling Propositions (USP) to increase sales efficiency and improve customer experience. Companies are also facing a huge challenge in managing high volumes of customer interactions, while also needing to optimize their sales processes to increase revenue. Adopting sales chatbots has become a powerful solution to meet this need. Therefore, chatbots, with their ability to operate continuously and handle multiple interactions simultaneously, provide an effective solution to address these issues. | |
| Method |  |
| * Data crawling: Systematically gathering raw data from the website, compiling a comprehensive dataset for the ChatBot. * Data Preprocessing: Cleaning and organizing the collected data. This improves the quality of the dataset for the model. * Data Splitting: The cleansed data is split to preserve better semantic structure and allows customization of delimiters. * Storing Text as Numerical Vectors: This step converts text into numerical vectors. This transformation allows the ChatBot to process and analyze text data effectively. * Retrieval: The retrieval system uses algorithms to search the most similar information base on how well it matches the user's request. * Response Generation: Once relevant information is retrieved, the ChatBot generates a response, based on prompts and chat history. | |

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| Data |  |
| * **Source Website:** <https://769audio.vn/> (focused solely on audio electronics) * **Scope of Data:** * Tên sản phẩm (Product name) * Giá (Price) * Link sản phẩm (Product link) * Link ảnh (Thumbnail link) * Tình trạng (Status) * Giới thiệu (Introduction) * Chi tiết (Detailed content) * Tập link ảnh (Product image links) * **Tools Used:** * WebScraper.io: A Chrome Extension for automatic data scraping, enabling easy data export. * Python beautifulsoup4 4.12.3: A library for web scraping to collect additional data inaccessible via WebScraper.io. | |
| Expected  Outcome |  |
| * Our Sales Consulting Chatbot Project should provide real-time, accurate information and recommendations, tailored to the specific needs of each customer. This would streamline customer interactions, reduce response times, and improve overall customer satisfaction. * Benefits: * **Improved Customer Care Service:** Our system provides instant, 24/7 support, significantly reducing wait times and enhancing the overall user experience. This is particularly beneficial for customers who may be reluctant to engage directly with sellers. * **Cost Efficiency:** By automating responses and managing multiple customer interactions simultaneously, our chatbot reduces the need for extensive human customer service resources, allowing them to focus on more complex and high-value interactions. * **Market Competitiveness:** The implementation of our innovative chatbot solution has not only improved customer satisfaction but also significantly differentiated us from competitors. | |
| Role by  Member |  |
| * **Vuong Minh Khanh - Team Leader:** * Collects chat conversation data and evaluates the chatbot's performance. * Plans tasks, sets goals, and monitors team progress. * Writes the project report. * **Hua Quang Dat - Team Member:** * Researches LangChain integrations and configures the model. * Designs the chatbot interface. * Contributes to the report writing. * **Phung Trung Hieu - Team Member:** * Handles data preprocessing. * Tests the bot responses using chat conversations. * Assists in report documentation. * **Tran Thi Quynh Dung - Team Member:** * Collects product data. * Prepares PowerPoint presentations. | |

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| Schedule  Summary |  |
| * **June 11, 2024, to July 17, 2024:** * General Tasks: Team members will research, build chatbots, and collect necessary data. * **July 18, 2024, to July 28, 2024:** * General Tasks: Members will run chatbot tests and evaluate performance. * Individual Tasks: * Vuong Minh Khanh: Will evaluate the accuracy of conversations and support team members. * Hua Quang Dat: Will find a method to evaluate the accuracy of ChatGPT other than manually. * Phung Trung Hieu: Will complete data preprocessing and research applying preprocessing techniques to the ChatGPT bot. * Tran Thi Quynh Dung: Will collect additional data to reach at least 1000 product data. * **July 29, 2024, to August 3, 2024:** * Vuong Minh Khanh: Will collect more chat data and check the accuracy of the bot. * Hua Quang Dat: Will design the chatbot interface. * Phung Trung Hieu: Will prepare report content. * Tran Thi Quynh Dung: Will prepare presentation slides.      * **August 4, 2024, to August 14, 2024:** * Vuong Minh Khanh: Will finish customizing the chatbot and start writing the report. * Hua Quang Dat: Will write the report. * Phung Trung Hieu: Will write the report. * Tran Thi Quynh Dung: Will prepare presentation slides. | |
| Comment &  Assessment |  |
| <Comment and assessment **by the instructor.**> | |