Code Helper

Powered by - StableCode

Problem Statement

- Complex Coding Concepts: Navigating intricate coding concepts and algorithms can be time-consuming and mentally taxing.
- Code Errors and Debugging: Identifying and rectifying bugs and errors can lead to frustration and slow down development cycles.
- Lack of Resources: The abundance of programming languages and frameworks can make it difficult to find accurate and up-to-date resources.
- Time Constraints: Meeting project deadlines while ensuring code quality is a constant balancing act.

StableCode AI Engine

- (**stablecode-completion-alpha-3b-4k**) : The heart of the application, this AI engine is responsible for processing and understanding user queries. It has been fine-tuned to cater specifically to coding-related questions, ensuring accurate and relevant responses.

Write a Binary Search Function

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```
The binary search function returns the index of the desired element if the array i
        ### otherwise it returns -1.

        """

        def binary_search(array, start, end, target):
            # Write your code here.
            while (end >= start):
                mid = int(start + (end-start)/2)
                if target == array[mid]:
                    return mid
                elif target > array[mid]:
                    start = mid + 1
                else:
                    end = mid - 1
            return -1

        if array and start is None and end is None and target is not None:
            return binary_search(array, start, end, target)
        else:
            raise ValueError('Invalid Inputs')
```

Frontend & Backend

- **Streamlit Frontend**: The user-facing aspect of the Code Helper application is powered by Streamlit, a powerful Python library designed for creating interactive web applications with ease. Streamlit provides a seamless interface for users to interact with the application, enabling them to submit queries and receive responses effortlessly.
- **Flask Backend**: At the core of the application's functionality lies the Flask backend, a versatile and lightweight Python web framework. The Flask backend serves as the bridge between the frontend and the AI engine, ensuring smooth communication and data exchange.

Future Scope

- **VS Code Extension**: As we look ahead, our vision for Code Helper extends to creating a dedicated extension for Visual Studio Code. This extension will seamlessly integrate with developers' coding environment, providing real-time suggestions, explanations, and assistance directly within the editor.
- **Integration with Version Control**: Integrating Code Helper with version control systems like Git could provide developers with insights into code changes and conflicts.
- **Expanded Language Support**: The Code Helper application can be expanded to support an even broader range of programming languages and frameworks.

THANK YOU!!