

## Option 2

- Project Proposal: **Google Automation Chatbot Interface**
- Introduction: In today's fast-paced digital landscape, automation plays a crucial role in enhancing productivity and efficiency. This project aims to develop a user-friendly chatbot interface integrated with Google services, enabling users to request and execute microservices API calls or CLI commands seamlessly. The chatbot will serve as a versatile tool, capable of performing a wide range of tasks based on predefined keywords or commands mapped to specific actions.
- Key Features:
  - Chat Interface: Implement a chat interface utilizing Google's communication platforms such as Google Chat or Google Assistant. Users can interact with the chatbot using natural language queries or commands.
  - Microservices API Calls and CLI Commands: We expect only the CLI command or the API call (not run is necessary)
  - Develop a dynamic mapping mechanism to match keywords or commands entered by users with the appropriate CLI commands or API calls
  - Utilize natural language processing (NLP) techniques to identify and interpret user intents accurately.
  - Task Automation: Provide informative error messages and feedback to users in case of invalid commands or errors during command execution.
  - Ensure a seamless user experience by guiding users through the troubleshooting process when necessary.
  - Technology Stack: Google Cloud Platform (GCP): Utilize GCP services for hosting the chatbot application and integrating with Google communication platforms.
  - Natural Language Processing (NLP): Implement NLP techniques using libraries such as NLTK or spaCy for interpreting user queries and intents.
  - Error Handling: Implement robust error handling mechanisms to gracefully handle exceptions and provide meaningful feedback to users.
- Conclusion: The Google Automation Chatbot Interface project offers an opportunity to create a highly interactive and efficient communication platform for executing routine tasks on demand.