Project Plan
Self-Service Support Chatbot for Google Cloud

The Capstone Experience

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Functional Specifications

• Chatbot to suggest solutions to GCP users' problems
• Finds and links relevant documentation
• Helps customers troubleshoot for common problems
• Collects relevant error information
• Refers customer to human support if the chatbot is unable to help
• Has a dashboard of analytics for chatbot performance
Design Specifications

• The chatbot is using Dialogflow's standard UI
• The dashboard shows analytics about bot performance:
  ▪ Bot's success rate
  ▪ Number of questions before a solution
• Statistics about documentation being accessed
• Ability to configure
  ▪ Add, delete, or edit documentation being scraped
Screen Mockup: Chatbot Statistics
Screen Mockup: Chatbot Configuration

Documentation

- Some Document
  - Doc url
  - Enabled: On
  - Delete

- Some Document
  - Doc url
  - Enabled: On
  - Delete

- Some Document
  - Doc url
  - Enabled: On
  - Delete

- Some Document
  - Doc url
  - Enabled: Off
  - Delete

Save  Add  Cancel
Screen Mockup: Chatbot Interaction

Hello

Hi! How are you doing?
I cannot connect to my instance

What kind of error did you receive?

Talk to agent
Technical Specifications

• The user will interact with Dialogflow's chatbot interface and ask it a question.
• Dialogflow passes text inputs to webhook which will pass it onto NLP
• NLP is used to find relevant documentation in Datastore
• Dialogflow provides an answer to the user's question
• At the end of the session, interaction data with the user is stored in Datastore
System Architecture

User Input
Client Application Front-end
Dialogflow API
Webhook Service
Google Datastore

Google NLP API
Google AI API
Beautiful Soup API
System Components

- Software Platforms / Technologies
  - Google Cloud Platform
  - Google Dialogflow CX
  - Google Datastore
  - GCP AI platform
  - GCP Natural Language Processing API
  - React Framework
Risks

• Working on GCP simultaneously
  ▪ Could break things if multiple people try to use something at once
  ▪ Mitigation: discuss when doing any GCP deployments, assign one person to handle DevOps

• Might miss stuff in support documents
  ▪ GCP has extensive support documents, might not access important information
  ▪ Mitigation: find a comprehensive way to scrape vast data, extensive testing with a variety of samples
Risks

• Doing decision trees by hand
  ▪ We need to make a lot of decision trees
  ▪ Mitigation: either find a way to automate or limit the number that we create

• Running code within client’s GCP environment for security
  ▪ Have no idea how to do this
  ▪ Mitigation: Create a script that users can run within their GCP platform
Questions?