

# Querying Fine-Tuned Model for Household Assistance Responses

Leveraging GPT-3.5 Turbo for Answering  
Common Household Queries

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# Overview

- • Fine-tuning a language model for household-related queries
- • Using OpenAI's GPT-3.5 Turbo for accurate, personalized responses
- • Querying fine-tuned models to automate everyday task assistance

# Fine-Tuning the Model

- • Selecting a relevant dataset for household-related questions
- • Fine-tuning GPT-3.5 Turbo to specialize in providing useful answers
- • Using `client.chat.completions.create` to query the fine-tuned model

# Dataset for Fine-Tuning

- Sample household questions:
  - • How do I change the air filter in the HVAC system?
  - • What is the password for the guest Wi-Fi?
  - • Where are the spare lightbulbs?
  - • How can I remove pet hair from the couch?
- Format: JSONL with prompt and completion pairs

# Example Query Flow

- Question: 'How do I change the air filter in the HVAC system?'
- Fine-Tuned Model Query:
- Q: How do I change the air filter in the HVAC system?
- A: Turn off the HVAC system, remove the old filter from the slot, and replace it with a new one. Make sure it fits properly.
- Output: Personalized, accurate household response

# Querying the Fine-Tuned Model

- • Using `openai.ChatCompletion.create` for generating responses
- • System Message: 'You are a helpful assistant providing accurate answers to household-related queries.'
- • User Prompt Example: 'How do I change the batteries in the remote?'

# Code Implementation Overview

- • API call structure
- • Setting the model ID
- • Looping through questions to query the fine-tuned model
- • Extracting responses and printing them

# Sample Output

- Input Question: 'Where are the spare lightbulbs?'
- Output Answer: 'The spare lightbulbs are in the storage closet, in the box on the top shelf.'
- Demonstrating personalized responses for household tasks



# Benefits of Fine-Tuning the Model

- • Improved accuracy and relevance of responses
- • Customization to specific tasks (household assistance)
- • Reduction in user queries by automating answers for common issues

# Conclusion

- • Fine-tuning GPT-3.5 Turbo enhances the model's ability to provide helpful, task-specific responses
- • Using AI to streamline everyday household tasks and improve efficiency
- • Future scope: Extending fine-tuning for other domains like health, maintenance, etc.

# Questions & Answers

- Open floor for any questions or clarifications.