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Spring 2024

Home

**Announcements** 

Attendance

Assignments

Discussions

Grades

People

**Files** 

**Syllabus** 

Quizzes

Modules

BigBlueButton

YuJa

Chat

**Collaborations** 

# Assignment 6: Customizing Your Flask App

Start Assignment

**Due** Friday by 11:59pm Points 100

Submitting a text entry box, a website url, or a media recording

Available Feb 1 at 12am - Feb 10 at 11:59pm

You may speak with fellow students to figure out Flask, Python or GitKraken issues, but your creative work must be your own.

You may also ask questions on the Slack question channel and have fellow students (or the professor) answer them.

- You will be working with your personal (not your team) Bitbucket workspace.
- You need to have at least 5 commits to your local repository. These commits have to be around significant coding or comment changes. This will be used to better understand how much of this work was done by you rather than shared with another.

### You will be adding a Text-to-Speech feature to the application

1. You should have already imported the following repository into your personal workspace: https://bitbucket.org/txstatecs3398all/flask\_email\_openai\_example/src/master/

#### 2. In GitKraken:

- Open your local repository.
- Checkout the 17a-empty-env-file branch (do this by double-clicking on the label).
- Right click on the branch and select the "Create branch here" option.
- Name the branch "<Your Net\_Id> Adding\_create\_speech\_feature"

#### 3. In VSCode:

- 1. Open the repository.
- 2. You should already have a working Python and Flask environment (see previous assignment for how set up the python-flask-openai environment).
- 3. Study these links for guidance on adding code: <a href="https://platform.openai.com/docs/guides/text-to-">https://platform.openai.com/docs/guides/text-to-</a> speech/streaming-real-time-audio => and https://platform.openai.com/docs/guides/text-to-speech/voiceoptions  $\implies$  as well as study following files as examples of using OpenAI apis:
  - templates/drawme.html
  - draw\_python/{draw\_form.py,draw\_route.py}
  - the menu in templates/layout.html
  - the lines containing references to "blueprint" features near the top and at the bottom of routes.py
- 4. Copy templates/drawme.html into templates/create\_speech.html
  - Are you remembering to stage and commit when you think it is important in these steps? The assignment requires it.
- 5. Create a new directory, create\_speech\_python.
- 6. Copy draw\_python/draw\_form.py into create\_speech\_python/create\_speech\_form.py
- 7. Copy draw\_python/draw\_route.py into create\_speech\_python/create\_speech\_route.py
- 8. Using the OpenAI createSpeech link above, modify the new create\_speech python and html files to use the Create Speech API instead of the Draw Image API. Choose a voice you like from the voice options (see other link in step 3).
  - Are you remembering to stage and commit when you think it is important in these steps? The assignment requires it.
- 9. Make sure you make the additions to routes.py and layout.html. The additions to routes.py should be easy to figure out and are certainly easy to add (see the last bullet in step 3). The addition to layout.html should be obvious. You may decide you want to edit the static/css/main.css file to accommodate the additional menu item in a pretty way ... but this is not required.
- 10. Run/Debug the file: Fix bugs as needed. The put in some txt

### 5. In GitKraken:

1. Once you are satisfied with your changes, use GitKraken (or VSCode) to push the changes to the Bitbucket

### 6. Submitting on Canvas:

- Submit the URL of your Bitbucket repository with the code changes
- Submit either
  - a screen shot of the text you submitted and a recording of the audio generated
  - a screen shot of the text you submitted and file returned by the API.

## Extra Credit (970 / #students submitting extra credit - minimum of 10 pts).

- On yet another branch, modify the code so that when someone uses the Ask Me feature, they can specify a "system" role as well as the user's prompt via the UI.
- The response page of the application should show the prompt, the system role and the response.
- So, for example, if the user asks, "Why is the professor making the extra credit points dependent upon the number of students who do the extra credit?" in the Ask Me form, the user can also specify a system role like, "You are an old professor who wants students to do their own extra credit," or "You are a student befuddled about why a professor assigns variable pointed extra credit," or, like, whatever.
- Submit the URL of the Bitbucket branch that has your extra credit changes AND
- Submit a text summary of your changes AND
- Submit a screen shot of the visible UI changes to the application that allow a user to specify the system role AND
- Submit a screen shot of a response generated by the application with the new features.

Customizing Your Flask App		
Criteria	Ratings	Pts
Bitbucket URL with code changes and at least 5 commits		50 pts
Screen shot of your text prompt.		25 pts
An audio file of the generated speech in one of the OpenAI formats.		25 pts
Extra Credit: 1) URL of Bitbucket branch with changes and an intelligent number of commits. 2) Text summary of your changes 3) Screen shot of the visible changes you made 4) Screen shot of the response generated by the application.  The points are zero so that when the Xtra credit is completed and the points are added, they behave like xtra credit points.		0 pts
То		nts: 100