Novel Recipe Generation

PRESENTATION 5 - OCTOBER, 12

Indraprastha Institute of Information Technology

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TASKS TO BE DONE:

1 Train the GPT2 model on the updated RecipeDB data.

2 Generate the 500 recipes using the GPT2 model.

3 Check if the generated recipes have complete recipe cooking instructions.

Authentication of Github Profile on the Server

We faced the following issues while trying to authenticate the github profile on the server:

Support for password authentication was removed on August 13, 2021.

Authentication failed for 'https://github.com/cosylabiiit/Monsoon22-ratatouille-nove-recipe-gen.git/'

WHAT WE DID ABOUT IT?

We explored the WinSCP (Windows Secure Copy)

It is a **free and open-source SSH File Transfer Protocol** (SFTP), **File Transfer Protocol** (FTP), **WebDAV**, **Amazon S3**, and **secure copy protocol** (SCP) client for **Microsoft Windows**.

Its main function is secure file transfer between a local computer and a remote **server**.

For secure transfers, it uses the **Secure Shell** protocol (SSH) and supports the SCP protocol in addition to SFTP.
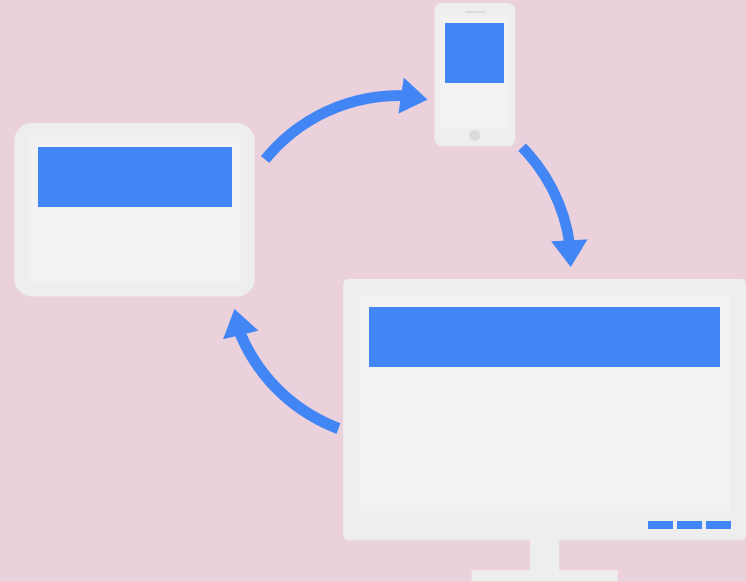
We realized that the json file on which the GPT2 model has to be trained is not an updated json file meaning it contains some recipe id's which have been removed in the updated RecipeDB data.

DATA PREPROCESSING STEPS:

01 We fetched out the recipe id's from the updated RecipeDB data and created a list of those recipe id's say list1.

02 Then, we removed all the recipe id's from the old json file that do not belong to the list1.

03 We generated the new json file which contains only those recipe id's and its cooking instructions which belong to the updated RecipeDB data.

[{"Recipe_id": "2610", "steps": " | 1.\tPlace 3 cups water, lentils, tomato, carrot, onion, garlic, and chicken bouillon in a stockpot over medium heat; cook until vegetables and lentils are softened, 20 to 25 minutes. Remove from heat and cool to lukewarm. | 2.\tBlend vegetable and lentil mixture with an immersion blender until smooth. Stir 1 cup water, cumin, sea salt, pepper, and coriander into soup; heat over medium heat until warmed. | --"}, {"Recipe_id": "2611", "steps": " | 1.\tHeat oil in a pot over medium heat; cook and stir onion in the hot oil until transparent, 5 to 10 minutes. Stir tomato paste and garlic into onion; cook, stirring quickly, for 1 minute. Pour in boiling chicken stock. | 2.\tStir cardamom, bay leaf, salt, and pepper into onion-stock mixture; bring to a boil. Add green beans and carrots; return to a boil, reduce heat to medium-low, and simmer until green beans are softened, about 30 minutes. | --"}, {"Recipe_id": "2612", "steps": " | 1.\tHeat olive oil in a large saucepan over medium heat; cook and stir onion until translucent, about 7 minutes. Mix in lamb, salt, and black pepper; cook and stir until lamb is lightly browned, 5 to 10 more minutes. | 2.\tStir in tomato sauce and water; season with salt and black pepper. Bring lamb mixture to a boil and reduce heat to low. Simmer lamb in sauce until very tender, at least 1 hour, adding more water as needed. Stir occasionally. | 3.\tPreheat oven to 350 degrees F (175 degrees C). | 4.\tStir okra into lamb mixture, adding more water if necessary, and bring to a boil. Spoon the bamia into a 2-quart baking dish and adjust salt and black pepper; cover dish with foil. | 5.\tBake in the preheated oven until okra is tender, about 45 minutes; uncover for last 10 minutes of baking. | --"}, {"Recipe_id": "2613", "steps": " | 1.\tCook the onions in 1 1/2 teaspoons of olive oil in a skillet over medium heat until soft and translucent. | 2.\tPulse the garbanzo beans, imitation sour cream, cornmeal, garlic, cumin, coriander, salt, and hot sauce in a food processor until smooth. Transfer to a bowl and stir in the onions; cover and chill for 30 minutes. | 3.\tPlace 1/4 cup cornmeal in a shallow dish. Form the garbanzo bean dough into 6 patties, 1/2-inch thick; roll the cakes in cornmeal. | 4.\tHeat 2 tablespoons of olive oil in a large skillet over medium heat. Cook the falafel cakes until browned on both sides, about 5 minutes per side. | --"}, {"Recipe_id": "2614", "steps": " | 1.\tPreheat the oven to 350 degrees F (175 degrees C). Place the hazelnuts on a baking sheet, and bake for about 5 minutes, or until fragrant. While the nuts are still hot, pour them onto a tea towel. Fold the towel over them to cover, and rub vigorously to remove the skins. Set aside to cool. | 2.\tIn a dry skillet over medium heat, toast the sesame seeds until light golden brown. Pour into a medium bowl as soon as they are done so they will not continue toasting. In the same skillet, toast the coriander and cumin seeds while shaking the pan or stirring occasionally until they begin to pop. Transfer to a food processor. Process until finely ground, then pour into the bowl with the sesame seeds. Place the cooled hazelnuts into the food processor, and process until finely ground. Stir into the bowl with the spices. Season with salt and pepper, and mix well. | --"}, {"Recipe_id": "2615", "steps": " | 1.\tPreheat oven to 350 degrees F (175 degrees C). Butter a 9x13-inch baking dish. | 2.\tPlace the pastry sheets in the baking dish and place the dish in the oven. Watch it closely. When the top layer turns crunchy and golden, remove it from the oven. Continue until all the sheets are cooked. | 3.\tPreheat the oven's broiler. | 4.\tIn a bowl, combine walnuts, pecans, hazelnuts, raisins, coconut and 1/4 cup sugar. Break cooked pastry into pieces and stir into nut mixture. Spread mixture evenly in 9x13-inch dish. | 5.\tBring milk and 1/2 cup sugar to a boil in a medium saucepan over medium heat. Pour over nut mixture. | 6.\tBeat the heavy cream with the remaining 1/2 cup sugar until stiff peaks form. Spread evenly over nut mixture in dish. | 7.\tPlace dessert under oven broiler until top is golden brown, about 10 minutes. Serve hot. | --"}, {"Recipe_id": "2616", "steps": " | 1.\tHeat broth in a saucepan over medium heat; add rice and simmer until rice is slightly tender, 10 to 12 minutes. | 2.\tHeat butter and oil in a skillet over medium heat; cook onions in the hot butter-oil mixture, stirring constantly, until onions are golden brown, 15 to 20 minutes. Reserve about 1 tablespoon caramelized onions for garnish; spoon the remaining caramelized onions into the simmering broth. | 3.\tMix yogurt, lemon juice, and salt in a bowl; whisk flour into yogurt mixture until smooth. Blend yogurt mixture and 1 cup broth (free of onion and rice) in a blender until smooth. | 4.\tPour blended yogurt mixture into simmering broth; bring to a boil. Reduce heat and simmer until flavors have blended, 2 to 3 minutes. | 5.\tGarnish with reserved caramelized onion and toasted pine nuts. | --"}, {"Recipe_id": "2617", "steps": " | 1.\tBring 1 1/4 cup vegetable broth and water to a boil in a saucepan, stir in couscous, and mix in salt and black pepper. Reduce heat to low and simmer until liquid is absorbed, about 8 minutes. | 2.\tHeat 3 tablespoons olive oil in a skillet over medium-high heat; stir in pine nuts and cook, stirring frequently, until pine nuts smell toasted and are golden brown, about 1 minute. Remove from heat. | 3.\tHeat remaining 2 tablespoons olive oil in a saucepan; cook and stir garlic and shallot in the hot oil until softened, about 2 minutes. Stir black olives and sun-dried tomatoes into garlic mixture and cook until heated through, 2 to 3 minutes, stirring often. Slowly pour in 1 cup vegetable broth and bring mixture to a boil. Reduce heat to low and simmer until sauce has reduced, 8 to 10 minutes. | 4.\tTransfer couscous to a large serving bowl, mix with sauce, and serve topped with parsley and pine nuts. | --"}, {"Recipe_id": "2618", "steps": " | 1.\tPour the beans into a pot and bring to a boil. Mix them well and add onion, tomato, olive oil, cumin, parsley, lemon juice, salt, pepper, and red pepper. Bring the mixture back to a boil, then reduce the heat to medium. Let the mixture cook 5 minutes. Serve warm with grilled pita. | --"}, {"Recipe_id": "2619", "steps": " | 1.\tCombine the chickpeas, vinegar, coriander, cayenne pepper, and cumin in a resealable bag or container with a tight-fitting lid. Store in refrigerator while prepping remainder of dish, shaking occasionally. | 2.\tBring a pot of lightly salted water to a rolling boil. Cook the ditalani pasta in the boiling water until cooked through yet firm to the bite, about 8 minutes; drain and set aside. | 3.\tCombine the rice with enough cold water to cover; allow to soak for 20 minutes. Drain. | 4.\tMeanwhile, combine the lentils with enough water to cover in a pot; season with salt and pepper. Bring the lentils to a boil and cook at a boil until tender, about 30 minutes. Drain. | 5.\tHeat the olive oil in a saucepan over medium-high heat; cook and stir the onion and garlic in the hot oil until translucent, 5 to 7 minutes. Add the crushed tomatoes, season with salt and pepper, reduce heat to medium-low, and maintain at a simmer while preparing remainder of dish. | 6.\tMelt the butter in a pot over medium-high heat. Add the rice to the butter, increase heat to high, and fry for 4 to 5 minutes, stirring constantly. Pour the chicken stock over the rice; bring to a boil. Season the rice mixture with salt and pepper, reduce heat to low, cover the pot, and cook until rice is tender, and the liquid has been absorbed, about 20 minutes. | 7.\tMix the rice and lentils together on a large serving platter. Spread the cooked ditalani over the rice and lentil mixture. Serve with the marinated chickpeas, the tomato sauce, and the French-fried onions as condiments. | --"}, {"Recipe_id": "2620", "steps": " | 1.\tBring 2 cups water to a boil in a saucepan. Add wheat berries. Cover and remove from heat. Let soak, 6 hours to overnight. Drain. | 2.\tCombine soaked wheat berries with remaining 4 cups water; bring to a boil. Simmer over medium heat for 10 to 15 minutes. Remove from heat; let stand until berries pop open, 10 to 15 minutes more. | 3.\tDivide wheat berries among serving bowls. Add a few spoonfuls of hot milk, a handful of almonds, and a sprinkle of cinnamon to each bowl before serving. | --"}, {"Recipe_id": "2621", "steps": " | 1.\tHeat olive oil in small to medium

We replaced all the old files with the new updated files in the colab file provided by Mansi ma'am.The colab file generates the train and test data.

Next, we will train the GPT2 model on the updated train and test file,
And check for any errors in the generated 500 recipes.

Thank You