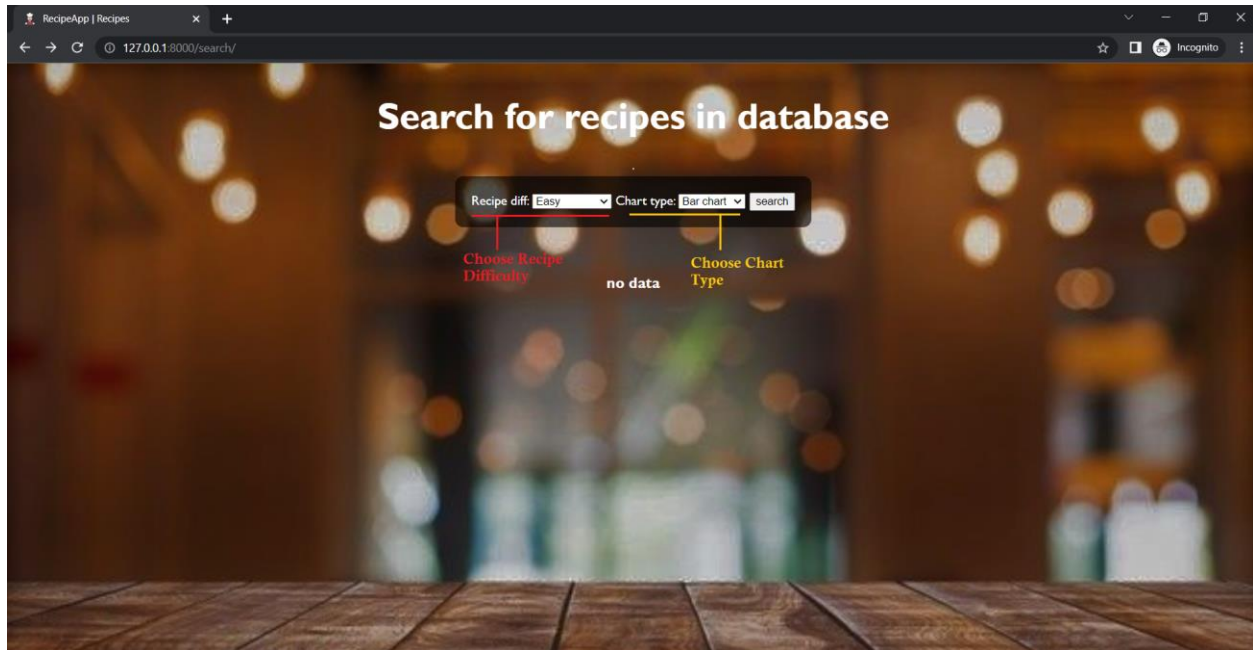


Implement Search Functionality for Recipe App

On this Recipe App I am adding new feature – Search Using Recipe difficulty level. Using this feature users should be able to choose difficulty level of recipes from the database and the type of chart they want the data to be displayed on.



According to the search criteria entered by the user (recipe difficulty and chart type) the app should extract the recipes needed from the database as QuerySet, convert the QuerySet to pandas DataFrame and display the results as table.

The screenshot shows the same web browser window, but now the search criteria are 'Recipe diff: Intermediate' and 'Chart type: Bar chart'. The search results are displayed as a table with 3 rows. The table has columns: id, name, cooking_time, ingredients, description, and pic. The first row is for a Steak recipe, the second for a Pizza recipe, and the third for a Vanilla Ice-Cream recipe.

id	name	cooking_time	ingredients	description	pic
0 13	Steak	45.0	Steak, Butter, Salt, Pepper, Garlic	Remove steaks from refrigerator and any packaging and let sit at room temperature for at least 30 minutes. Rub each side with the olive oil to coat. Combine the salt, pepper, and white pepper in a small bowl. Rub both sides of each steak with the rub mixture. Preheat oven to 375 degrees. Preheat a heavy, oven-safe skillet over high heat until it is smoking hot. Sear steaks in the hot pan for 2-3 minutes per side. If the steak has a side of fat, turn the steak onto its side and render the fat by searing it for 2-3 minutes as well. Slide the skillet with the seared steaks in it into the oven to finish cooking. Remove the steaks from the oven 5 degrees before the desired level of doneness is achieved, or 130 degrees F for medium rare. While the steaks are cooking, use a fork to combine the butter with garlic in a small bowl. When the steaks are removed from the oven immediately top with 1 tablespoon of the butter mixture and allow the steaks to rest 10 minutes before cutting into them. The temperature of the steak will continue to rise as it rests by about 5 degrees.	recipes/download_13_PxLsYvI.jfif
1 14	Pizza	30.0	Oil, Sugar, Flour, Salt, Sauce, Any toppings	Place the warm water in the large bowl of a heavy duty stand mixer. Sprinkle the yeast over the warm water and let it sit for 5 minutes until the yeast is dissolved. Add the flour, salt, sugar, and olive oil, and using the mixing paddle attachment, mix on low speed for a minute. Then replace the mixing paddle with the dough hook attachment. Knead the pizza dough on low to medium speed using the dough hook about 7-10 minutes. Place a pizza stone on a rack in the lower third of your oven. Preheat the oven to 475°F for at least 30 minutes, preferably an hour. Dust your hands with flour and push the dough down so it deflates a bit. Prepare your desired toppings. About a third a cup each of tomato sauce and cheese would be sufficient for one pizza. One to two mushrooms thinly sliced will cover a pizza. Spoon on the tomato sauce, sprinkle with cheese, and place your desired toppings on the pizza. Slide the pizza off of the peel and onto the baking stone in the oven.	recipes/download_6_b8EUGC.jfif
2 17	Vanilla Ice-Cream	90.0	Vanilla, Milk, Sugar, Cream	Gather the ingredients. Whisk together the milk and sugar until the sugar is dissolved. Gently stir in the heavy cream and vanilla. Don't whip the mixture too much once you've added the heavy cream. You don't want to beat too much air into the mixture before it goes into the ice cream maker, or it will change the texture of the finished product. Churn according to the directions of your ice-cream maker's manufacturer. Enjoy immediately or freeze in a covered container to your desired firmness, at least 2 hours or overnight. While vanilla ice cream is great, it's even better when made with a real vanilla bean. If you have one available, it's easy to substitute it for the vanilla extract in this recipe: Using a paring knife, split a vanilla bean in half lengthwise. Scrape out the seeds and add them and the pod to the cream, milk, and sugar. Refrigerate the mixture for at least 30 minutes (overnight is better). Remove the pod and freeze your ice cream as normal.	recipes/download_14_JTyFlpo.jfif

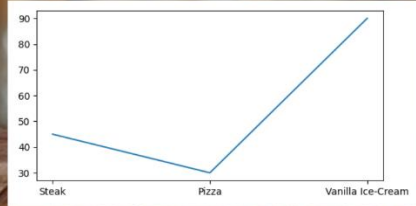
On the above image, I have chosen 'intermediate' difficulty level on the form and the app displayed three recipes with 'intermediate' difficulties to cook.

Data Analysis

The app also gives data visualization on the search page using 'matplotlib' library. According to the chart type chosen by the user, it displays a chart of the recipes searched names against their respective cooking times. The following images are the charts of recipes on the database with 'intermediate' difficulty and their cooking times compared.



3	Steak	45.0	Steak, Butter, Salt, Pepper, Garlic	<p>coat. Combine the salt, pepper, and white pepper in a small bowl. Rub both sides of each steak with the rub mixture.</p> <p>Preheat oven to 375 degrees. Preheat a heavy oven-safe skillet over high heat until it is smoking hot. Sear steaks in the hot pan for 2-3 minutes per side. If the steak has a side of fat, turn the steak onto its side and render the fat by searing for 2-3 minutes as well.</p> <p>Slide the skillet with the seared steaks in it into the oven to finish cooking. Remove the steaks from the oven 3 degrees before the desired level of doneness is achieved, or 130 degrees F for medium rare.</p> <p>While the steaks are cooking, use a fork to combine the butter with garlic in a small bowl.</p> <p>When the steaks are removed from the oven immediately top with 1 tablespoon of the butter mixture and allow the steaks to rest 10 minutes before cutting into them. The temperature of the steak will continue to rise as it rests by about 5 degrees.</p>	recipes/download_13_PxLaYv
4	Pizza	30.0	Oil, Sugar, Flour, Salt, Sauce, Any toppings	<p>Place the warm water in the large bowl of a heavy duty stand mixer. Sprinkle the yeast over the warm water and let it sit for 5 minutes until the yeast is dissolved.</p> <p>Add the flour, sugar, and olive oil, and using the mixing paddle attachment, mix on low speed for a minute. Then replace the mixing paddle with the dough hook attachment. Knead the pizza dough on low to medium speed using the dough hook about 7-10 minutes.</p> <p>Place a pizza stone on a rack in the lower third of your oven. Preheat the oven to 475°F for at least 30 minutes, preferably an hour.</p> <p>Dust your hands with flour and push the dough down so it deflates a bit. Prepare your desired toppings. About a third a cup each of tomato sauce and cheese would be sufficient for one pizza. One to two mushrooms thinly sliced will cover a pizza. Spoon on the tomato sauce, sprinkle with cheese, and place your desired toppings on the pizza. Slide the pizza off of the peel and onto the baking stone in the oven.</p>	recipes/download_6_b8EUIGC
7	Vanilla Ice-Cream	90.0	Vanilla, Milk, Sugar, Cream	<p>Gather the ingredients. Whisk together the milk and sugar until the sugar is dissolved. Gently stir in the heavy cream and vanilla. Don't whip the mixture too much once you've added the heavy cream. You don't want to beat too much air into the mixture before it goes into the ice cream maker, or it will change the texture of the finished product. Churn according to the directions of your ice-cream maker's manufacturer. Enjoy immediately or freeze in a covered container to your desired firmness, at least 2 hours or overnight.</p> <p>While vanilla ice cream is great, it's even better when made with a real vanilla bean. If you have one available, it's easy to substitute it for the vanilla extract in this recipe. Using a paring knife, split a vanilla bean in half lengthwise. Scrape out the seeds and add them and the pod to the cream, milk, and sugar. Refrigerate the mixture for at least 30 minutes (overnight is better). Remove the pod and freeze your ice cream as normal.</p>	recipes/download_14_JTyFlpo



User Flow

