
Road Trip to Compare All Barcelona Wine Bar & Restaurant Locations

— An Optimization Project by Mackenzie
Holmgren and Junke Fan —

About Barcelona Wine Bar & Restaurant

The first Barcelona Wine Bar was opened by partners Andy Pforzheimer and Sasa Mahr-Batuz in Norwalk, CT in 1996, making it one of the first authentic Spanish restaurants in the US.

Owners incorporated experienced from living in Spain and Portugal and from 20 years as a chef at world-famous restaurants in France, California and New York to create Barcelona Wine Bar & Restaurant.

“The Barcelona Wine Bar wine program is a living, growing, ever-changing collection of wines of the highest quality from around the world– focused most specifically on Spain and South America. The list spans over 70 regions, hundreds of makers, and over 400 selections at any given time. There is a focus on makers that put quality and craft at the forefront– we do not chase brands or trends, but rather: patience, art, genius and dedication. Biodynamic winemaking, women winemakers, small-producers, iconic wines of provenance and craft — whether 3 hectares or 3000, the vein that runs through ALL of our wines is a true love of earth and excellence. ”

In 2007, Barcelona Wine Bar earned its first Award of Excellence from the Wine Spectator. By 2012, the award was upgraded to our first “Best Of” Award of Excellence, a notable honor for the Barcelona wine program and beverage team.

EXPANSIONS

Get Your Fill of Tapas at Barcelona South End, Now Open for Real

The small Connecticut-based chain has just opened its second Massachusetts location.

by Rachel Leah Blumenthal | @blumie | Dec 15, 2014, 9:01am EST

Via Barcelona South End [Official Site] and Barcelona South End now open [BooGuy]



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BLOG, FOOD

Barcelona Wine Bar to Open Another D.C. Restaurant

 by JESSICA SIDMAN
MAY 6TH, 2014



The Early Word on Barcelona Wine Bar

by Missy Frederick | @bylinemf | Oct 14, 2013, 9:30am EDT

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Now Open: 11 things to know about Barcelona Wine Bar, a Spanish-inspired tapas bar in South End



By Ted Williams and Olivia Arnold | January 31, 2019
Views: 41,511

Barcelona Wine Bar, a popular Spanish tapas and wine bar with a chic European vibe, is now open in South End's Design Center next to Superica.

Barcelona combines rustic classic Spanish and Mediterranean flavors with other influences from North Africa and Southern France, and the result is a delicious array of tapas, dried savory meat and Spanish cheeses that pair perfectly with the wide selection of wine from Barcelona's extensive menu.

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RiNo's Newest Patio Comes With Wine and Tapas

Look inside Barcelona Wine Bar, now open on Larimer Street

by Julie Saxton | @juliebexton | Mar 19, 2018, 9:51am MDT

Photography by Jonathan Phillips

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Barcelona Finally Makes its Debut on East Passyunk Avenue

The Spanish wine bar and tapas restaurant has officially (and softly) opened.

by ALEX TEWFIK • 7/13/2017, 4:45 p.m.



| FOOD INDUSTRY |

Barcelona Wine Bar and Bartaco Opening First South Florida Restaurants in Wynwood

NICOLE DANNA | APRIL 6, 2018 | 9:30AM



Locations

A map of the United States with red location pins indicating various locations. The pins are concentrated in the Northeast, Southeast, and Midwest regions. The text on the left lists the locations and their corresponding coordinates on the right.

Denver, CO	39.761470382304, -104.98143570184911
Fairfield, CT	41.20379670810275, -73.27099561774092
New Haven, CT	41.30576793847752, -72.92725335582206
Norwalk, CT	41.1116876765513, -73.41557288650061
Stamford, CT	41.055017382023195, -73.54076053863061
West Hartford, CT	41.76151291498975, -72.74334616136937
inman Park, GA	33.76297324689296, -84.35890064232882
Westside Ironworks, GA	33.78483530023947, -84.4108282
Brookline, MA	42.33891776523724, -71.13904894362848
South End, MA	42.34473520037009, -71.07101555767116
Charlotte, NC	35.21183013221625, -80.86008813246168
Raleigh, NC	35.77760019456034, -78.64576389011054
Philadelphia, PA	39.92837275332441, -75.16526802883557
Nashville, TN	36.14307820510094, -86.79169598465765
Knox-Henderson, TX	32.821335952341585, -96.784531074881
Reston, VA	38.95825758423113, -77.36088811533477
14th Street - D.C.	38.91224824547578, -77.03217772883558
Cathedral Heights - D.C.	38.934059485755064, -77.07269225767118

“Every restaurant shares the same name and culture, but unique to most ‘chains’, each location has its own Executive Chef that writes his/her menu nightly. We consider the concept chef driven, and the food inspired by simply prepared market fresh cuisine, like you would find in the food stalls of the Boqueria Market in Barcelona or Central Market in Valencia.”

Project Objectives

- Find the optimal route to visit all 18 locations with the goal of minimizing distance. Research to find estimates for average gas price and typical MPG. Use findings to estimate the cost taking this road trip if you are only considering the gas expense.
- Next consider the prices of hotels in the cities of each of the 18 locations. Find the maximum number of locations you can visit if you have a hotel budget constraint.

Approaching Objective 1

- Get GPS coordinates of locations
- Use MATLAB's mapping toolbox to get distance matrix
- Convert distances from radians to miles
- Utilize TSP
- Estimate average price of gas and typical MPG
- Compute $[\text{gas price} * \text{distance}/\text{MPG}]$ to get total cost of road trip when only considering gas expense

```
C = xlsread('Project_model_optimal_p2.xlsx','Sheet1','B3:C20');

d = zeros(18,18);
for i = 1:18
    for j = 1:18
        d(i,j) = deg2km(distance(C(i,1), C(i,2),C(j,1),C(j,2)));
    end
end
d = round(d / 1.6)
xlswrite("dis_matrix.csv",d)
```

	Danver, CO	Fairfield, CT	New Haven, CT	Norwalk, CT	Stamford, CT	West Hartford, CT	Inman Park, GA	Westside Ironworks, GA	Brookline, MA	South End, MA	Charlotte, NC	Raleigh, NC	Philadelphia, PA	Nashville, TN	Knox-Henderson, TX	Reston, VA	14th Street - D.C.	Cathedral Heights - D.C.
Danver, CO	0	1670	1687	1663	1657	1693	1218	1215	1771	1774	1363	1467	1584	1026	665	1479	1497	1495
Fairfield, CT	1670	0	19	10	18	48	800	801	136	139	587	477	134	812	1423	268	256	256
New Haven, CT	1687	19	0	29	37	33	818	819	117	120	605	494	152	832	1442	286	274	275
Norwalk, CT	1663	10	29	0	8	57	790	791	146	149	577	467	124	803	1414	258	246	247
Stamford, CT	1657	18	37	8	0	64	782	783	153	156	570	460	116	795	1407	250	238	239
West Hartford, CT	1693	48	33	57	64	0	845	846	92	95	634	524	180	852	1461	313	301	302
Inman Park, GA	1218	800	818	790	782	845	0	3	935	938	224	355	666	216	724	532	544	543
Westside Ironworks, GA	1215	801	819	791	783	846	3	0	937	940	226	357	668	213	721	533	545	544
Brookline, MA	1771	136	117	146	153	92	935	937	0	4	722	609	269	944	1552	403	391	392
South End, MA	1774	139	120	149	156	95	938	940	4	0	725	612	272	948	1555	406	395	395
Charlotte, NC	1363	587	605	577	570	634	224	226	722	725	0	131	453	341	931	325	333	333
Raleigh, NC	1467	477	494	467	460	524	355	357	609	612	131	0	346	459	1060	232	235	236
Philadelphia, PA	1584	134	152	124	116	180	666	668	269	272	453	346	0	688	1302	136	123	124
Nashville, TN	1026	812	832	803	795	852	216	213	944	948	341	459	688	0	617	555	571	569
Knox-Henderson, TX	665	1423	1442	1414	1407	1461	724	721	1552	1555	931	1060	1302	617	0	1171	1187	1185
Reston, VA	1479	268	286	258	250	313	532	533	403	406	325	232	136	555	1171	0	18	16
14th Street - D.C.	1497	256	274	246	238	301	544	545	391	395	333	235	123	571	1187	18	0	3
Cathedral Heights - D.C.	1495	256	275	247	239	302	543	544	392	395	333	236	124	569	1185	16	3	0

Approaching Objective 2

- Use distance matrix from Objective 1
- Make a new binary matrix using if statements: if distance < 25 miles, can stay at same hotel to visit both
- Use binary matrix to determine constraints
 - If the restaurants are < 50 miles from each other, you must go to both or neither, because you can stay at the same hotel
- Build a price matrix based on hotel price research
 - For restaurants that are < 50 miles from other restaurants, price of hotel is hotel cost / number of restaurants within 50 miles
- Set objective to maximize number of restaurants you can visit while staying within predetermined hotel budget constraint