

Improving Sacramento Light Rail Ridership by Promoting Light Rail Destinations

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Introduction

Sacramento is home to a light rail system operated by the Sacramento Regional Transit. Their main customers are work commuters. For non-commuters the light rail is less popular. To improve ridership outside of the normal work-commute, the light rail system should promote popular destinations that are close to the light rail. Marketing by Sacramento Regional Transit that highlights the most popular destinations near the light rail could increase the appeal of taking light rail and increase ridership. This information would also be important for people visiting Sacramento, such as guests to the new hotel near the University and 65th St light rail station. Currently, there is no information on main attractions in proximity to light rail stations. Data science tools can quickly compile this information from the Internet to create new marketing materials to improve ridership.

Data

Light rail station locations and data from Foursquare, a website that collects venue information, will be used to provide the best-rated destinations in proximity to the light rail. Locations of the light rail stations come from the Sacramento Area Council of Governments (SACOG), which has a data repository available to the public. The light-rail station locations are shown in the Appendix. (http://data-sacog.opendata.arcgis.com/datasets/66dbe2e5407a443aa019f21839d4ebde_0) Information on venues within a half-mile (800 meters) radius from each light rail station will be collected by an “explore-call” to Foursquare’s API for each light rail location. Calls for each venue in the Foursquare API will be used to compile each venue’s rating.

Methodology

There are 54 distinct light rail stations along 3 lines in the system. The Gold Line runs from downtown Sacramento to Folsom. The Blue Line runs from north Sacramento to south Sacramento. The Green Line runs through downtown up to north downtown, but its future end destination will be the Sacramento International Airport.

Foursquare found 2,513 venues within a half-mile (800 meters) from a light rail station. After removing duplicate records for venues that were within one-half mile from multiple stations, there were 1,104 distinct venues remaining. The fields in the stations’ venues table include the name of the station, ‘Station’; station location coordinates, ‘Station Latitude’, ‘Station Longitude’; Foursquare’s unique

venue ‘ID’, the venue name, ‘Venue’; the venue location coordinates, ‘Venue Latitude’, ‘Venue Longitude’, and the type of venue, ‘Venue Category’.

Ratings of each venue were compiled through calls to the Foursquare API using the venue’s Foursquare ID. Each venue and rating were then merged to the stations’ venues table on Venue ID.

Distance in miles to the closest light rail station for each venue was calculated using the Station and Venue location coordinates. The venue with the shortest distance to a light rail station was kept, while the records with longer distances for the same venue were dropped.

A view of the first two records in the venues table is displayed below. Notice that some venues are not rated on Foursquare and therefore have a rating of ‘NaN’.

Table 1: First Two Records of the Venues Table

	Station	Station Latitude	Station Longitude	ID	Venue	Venue Latitude	Venue Longitude	Venue Category	Rating	Distance
0	Marconi	38.62124	-121.42494	4d52bde4747f 6dcbe25ed0d4	7-Eleven	38.620045	-121.419002	Convenience Store	6.0	0.331767
1	Marconi	38.62124	-121.42494	4fab3115e4b0 0ae4ab25b4b2	A & M Food & Liquor	38.621162	-121.423559	Convenience Store	NaN	0.074933

Chart 1, below, shows a bar graph of the number of venues that received each rating. Ratings ranged from a high of 9.3 to a low of 4.8. A statistical summary of ratings is shown below that in Table 2. After removing unrated venues, there are 808 venues counted. The mean average rating is 7.26 and the median is 7.3.

Chart 1: Number of Venues that Received Each Rating

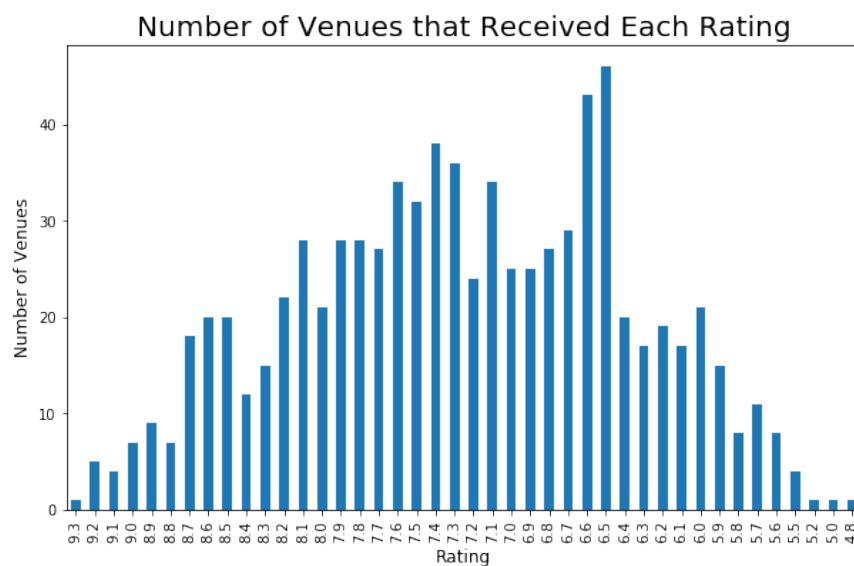


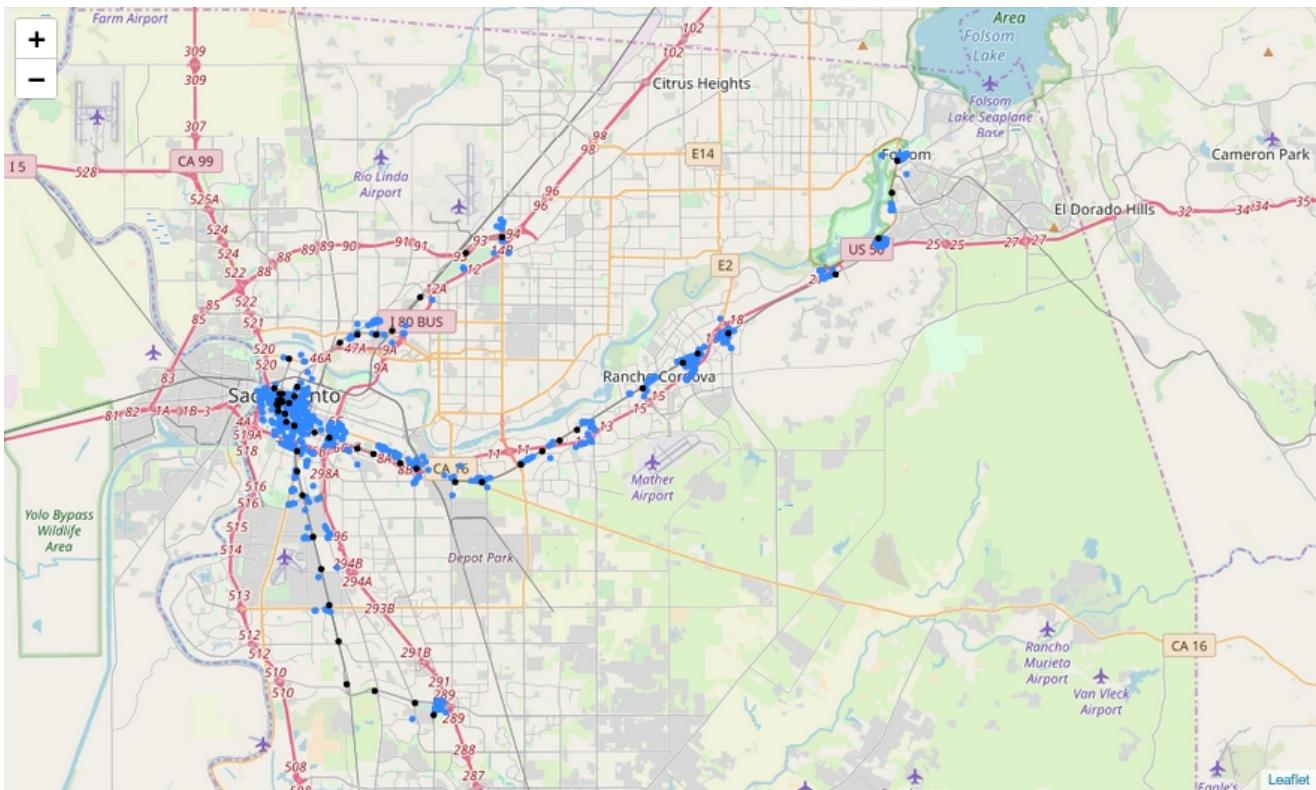
Table 2: Summary Statistics of Venue Ratings

count	808.000000
mean	7.264604
std	0.870747
min	4.800000
25%	6.600000
50%	7.300000
75%	7.900000
max	9.300000

Name: Rating, dtype: float64

Map 1, below, shows all the venues within a half-mile from each light rail station. Venues are represented by the blue markers and the light rail stations are the black markers.

Map 1 – Venues Compiled From Foursquare in Proximity the Light Rail



Results

In the Results section, we will review the venues and stations that Sacramento's Regional Transit would want to promote as top destinations provided by the light rail.

Table 3, below, lists the top-rated venues, represented by venues with ratings of 8.8 or greater. The table is sorted in descending order by venue rating, where the best-rated venue is listed first. Regional Transit should promote these venues as light rail destinations to current and potential riders. The top

venues include the Crocker Art Museum, Capitol Park, a grocery store called the Natural Foods Co-Op, a coffee shop Old Soul Co., a restaurant called Ella Dining Room & Bar, the State Capitol and the new arena for the Sacramento Kings called the Golden 1 Center. Building partnerships with these businesses could help improve ridership numbers for the light rail.

Table 3 – List of Top-Rated Venues with Rating of 8.8 or Greater

Venue	Station	Venue Category	Rating	Distance
Crocker Art Museum	7th & Capitol	Art Museum	9.3	0.44
Miosa Bride	Cathedral Square	Bridal Shop	9.2	0.10
Capitol Park	Archives Plaza	Park	9.2	0.21
Sacramento Natural Foods Co-op	29th Street	Grocery Store	9.2	0.07
The Sandwich Spot	16th Street	Sandwich Place	9.2	0.18
Old Soul Co.	16th Street	Coffee Shop	9.2	0.45
Ella Dining Room & Bar	Cathedral Square	American Restaurant	9.1	0.06
California State Capitol	Archives Plaza	Capitol Building	9.1	0.15
Golden 1 Center	7th & K	Basketball Stadium	9.1	0.09
Temple Coffee & Tea	29th Street	Coffee Shop	9.1	0.08
The Firehouse Restaurant	Sac Valley	American Restaurant	9.0	0.35
California State Railroad Museum	Sac Valley	History Museum	9.0	0.24
Track 7 Brewing Co.	City College	Brewery	9.0	0.27
Temple Coffee & Tea	9th & K	Coffee Shop	9.0	0.06
Taylor's Market	4th Ave/Wayne Hultgren	Grocery Store	9.0	0.04
Zocalo	16th Street	Mexican Restaurant	9.0	0.42
South	13th Street	Southern / Soul Food Restaurant	9.0	0.24
Karen's Bakery & Cafe	Historic Folsom	Café	8.9	0.10
Green Acres Nursery & Supply	College Greens	Garden Center	8.9	0.24
Mother	Cathedral Square	Vegetarian / Vegan Restaurant	8.9	0.04
Queen Sheba Ethopian Restaurant	Broadway	Ethiopian Restaurant	8.9	0.18
Tower Cafe	Broadway	New American Restaurant	8.9	0.32
Pipeworks	Alkali Flats	Gym	8.9	0.47
Dad's Kitchen	4th Ave/Wayne Hultgren	Diner	8.9	0.07
Bottle & Barlow	13th Street	Salon / Barbershop	8.9	0.07
Mikuni	12th & I	Sushi Restaurant	8.9	0.35
Samuel Horne's Tavern	Historic Folsom	Gastropub	8.8	0.21
Grange	9th & K	New American Restaurant	8.8	0.11
Coin-Op Game Room	9th & K	Bar	8.8	0.02

	Station	Venue Category	Rating	Distance
Venue				
Freeport Bakery	4th Ave/Wayne Hultgren	Bakery	8.8	0.06
Lou's Sushi	29th Street	Sushi Restaurant	8.8	0.18
Zuda Yoga	16th Street	Yoga Studio	8.8	0.32
Uncle Vito's Slice of NY	16th Street	Pizza Place	8.8	0.19

Another way to present destinations for light rail riders is to promote individual light rail stations. This can be done by grouping the top five venues for each light rail station then promoting the stations that have the best-rated venues. Table 4, below, lists the top five venues near each station, sorted by the mean average rating of the top five venues near each light rail station where the stations with the best rated venues are listed first. Regional Transit should promote stations with the highest average ratings, and ignore those with the lowest scores. There are also five stations not in Table 4. Four of these stations did not have a rated venue within a half-mile of the light rail station. There is one station at Capitol and 8th St where all the venues within a half-mile were closer to another light rail station.

Table 4 – Top 5 Venues Near Each Light Rail Station

		Venue	Venue Category	Venue Rating	Distance
Station	Station Rating				
16th Street	9.00	Old Soul Co.	Coffee Shop	9.2	0.45
	9.00	The Sandwich Spot	Sandwich Place	9.2	0.18
	9.00	Zocalo	Mexican Restaurant	9.0	0.42
	9.00	Uncle Vito's Slice of NY	Pizza Place	8.8	0.19
	9.00	Zuda Yoga	Yoga Studio	8.8	0.32
Cathedral Square	8.92	Miosa Bride	Bridal Shop	9.2	0.10
	8.92	Ella Dining Room & Bar	American Restaurant	9.1	0.06
	8.92	Mother	Vegetarian / Vegan Restaurant	8.9	0.04
	8.92	Cafeteria 15L	American Restaurant	8.7	0.31
	8.92	Pizza Rock	Pizza Place	8.7	0.05
29th Street	8.86	Sacramento Natural Foods Co-op	Grocery Store	9.2	0.07
	8.86	Temple Coffee & Tea	Coffee Shop	9.1	0.08
	8.86	Lou's Sushi	Sushi Restaurant	8.8	0.18
	8.86	Ink Eats & Drinks	American Restaurant	8.6	0.32
	8.86	Biba	Italian Restaurant	8.6	0.41
4th Ave/Wayne Hultgren	8.82	Taylor's Market	Grocery Store	9.0	0.04
	8.82	Dad's Kitchen	Diner	8.9	0.07
	8.82	Freeport Bakery	Bakery	8.8	0.06

		Venue	Venue Category	Venue Rating	Distance
Station	Station Rating				
	8.82	Oscar's Very Mexican Food	Mexican Restaurant	8.7	0.21
	8.82	Marie's Donuts	Bakery	8.7	0.05
Sac Valley	8.72	California State Railroad Museum	History Museum	9.0	0.24
	8.72	The Firehouse Restaurant	American Restaurant	9.0	0.35
	8.72	Evangeline's	Gift Shop	8.7	0.34
	8.72	Old Sacramento	Neighborhood	8.6	0.30
	8.72	Rocky Mountain Chocolate Factory	Dessert Shop	8.3	0.31
Historic Folsom	8.72	Karen's Bakery & Cafe	Café	8.9	0.10
	8.72	Samuel Horne's Tavern	Gastropub	8.8	0.21
	8.72	Snooks Candies & Ice Cream	Ice Cream Shop	8.7	0.17
	8.72	Marly & Moo	American Restaurant	8.7	0.30
	8.72	The Fat Rabbit Public House	Pub	8.5	0.10
9th & K	8.70	Temple Coffee & Tea	Coffee Shop	9.0	0.06
	8.70	Grange	New American Restaurant	8.8	0.11
	8.70	Coin-Op Game Room	Bar	8.8	0.02
	8.70	The Citizen Hotel, Autograph Collection	Hotel	8.6	0.10
	8.70	Bud's Buffet	Sandwich Place	8.3	0.09
8th & K	8.70	Frank Fat's	Chinese Restaurant	8.7	0.08
13th Street	8.68	South	Southern / Soul Food Restaurant	9.0	0.24
	8.68	Bottle & Barlow	Salon / Barbershop	8.9	0.07
	8.68	Dad's Sandwiches	Sandwich Place	8.6	0.15
	8.68	Urban Roots Brewing & Smokehouse	Brewery	8.6	0.39
	8.68	Fox & Goose Public House	Pub	8.3	0.18
Broadway	8.64	Tower Cafe	New American Restaurant	8.9	0.32
	8.64	Queen Sheba Ethopian Restaurant	Ethiopian Restaurant	8.9	0.18
	8.64	Tower Theatre	Indie Movie Theater	8.7	0.33
	8.64	Sunh Fish	Fish Market	8.4	0.28
	8.64	Jamba Juice	Juice Bar	8.3	0.36
Alkali Flats	8.50	Pipeworks	Gym	8.9	0.47
	8.50	Taqueria Jalisco	Mexican Restaurant	8.7	0.31
	8.50	Sampino's Towne Foods	Deli / Bodega	8.3	0.36
	8.50	Northstar Holistic Collective	Marijuana Dispensary	8.3	0.14

		Venue	Venue Category	Venue Rating	Distance
Station	Station Rating				
	8.50	Shine - Coffee Art Music	Coffee Shop	8.3	0.17
7th & Capitol	8.48	Crocker Art Museum	Art Museum	9.3	0.44
	8.48	Morton's The Steakhouse	Steakhouse	8.6	0.03
	8.48	Il Fornaio	Italian Restaurant	8.4	0.20
	8.48	Riverfront Promenade	Pedestrian Plaza	8.4	0.46
	8.48	House Kitchen & Bar	New American Restaurant	7.7	0.11
Archives Plaza	8.44	Capitol Park	Park	9.2	0.21
	8.44	California State Capitol	Capitol Building	9.1	0.15
	8.44	Zia's Delicatessen	Sandwich Place	8.2	0.23
	8.44	The California Museum	Museum	8.0	0.08
	8.44	Fluid Espresso Bar	Coffee Shop	7.7	0.16
City College	8.36	Track 7 Brewing Co.	Brewery	9.0	0.27
	8.36	Curtis Park	Park	8.4	0.40
	8.36	Chipotle Mexican Grill	Mexican Restaurant	8.3	0.48
	8.36	The Sandwich Spot	Sandwich Place	8.2	0.31
	8.36	Meet and Eat	American Restaurant	7.9	0.33
12th & I	8.34	Mikuni	Sushi Restaurant	8.9	0.35
	8.34	Sacramento Theatre Company	Theater	8.4	0.21
	8.34	The Torch Club	Nightclub	8.2	0.24
	8.34	P.F. Chang's	Chinese Restaurant	8.1	0.34
	8.34	Lucca Restaurant & Bar	Mediterranean Restaurant	8.1	0.37
7th & K	8.30	Golden 1 Center	Basketball Stadium	9.1	0.09
	8.30	Century DOCO and XD	Movie Theater	8.2	0.21
	8.30	Yard House	American Restaurant	8.2	0.22
	8.30	Macy's Taste Bar Cafe	Café	8.0	0.20
	8.30	Kimpton Sawyer Hotel	Hotel	8.0	0.13
48th Street	8.28	OneSpeed Pizza	Pizza Place	8.6	0.26
	8.28	Trader Joe's	Grocery Store	8.6	0.27
	8.28	Chocolate Fish Coffee	Coffee Shop	8.4	0.27
	8.28	The Shack	Pub	8.3	0.37
	8.28	Burr's Fountain	Ice Cream Shop	7.5	0.27
23rd Street	8.24	The Waterboy	French Restaurant	8.6	0.46
	8.24	Federalist Public House & Beer Garden	Beer Garden	8.4	0.43
	8.24	Localis	New American Restaurant	8.2	0.22
	8.24	Kupros Craft House	Bar	8.1	0.47

		Venue	Venue Category	Venue Rating	Distance
Station	Station Rating				
	8.24	Zelda's Original Gourmet Pizza	Pizza Place	7.9	0.34
Tiber	8.23	Capital Christian Center	Church	8.6	0.48
	8.23	TOGO'S Sandwiches	Sandwich Place	8.5	0.19
	8.23	Pine Tree House	Korean Restaurant	7.6	0.26
College Greens	8.14	Green Acres Nursery & Supply	Garden Center	8.9	0.24
	8.14	Roma II Pizzeria	Pizza Place	8.2	0.16
	8.14	Sae Jong Teriyaki	Asian Restaurant	8.0	0.27
	8.14	Starbucks	Coffee Shop	7.8	0.06
	8.14	Raley's	Supermarket	7.8	0.12
8th & O	8.08	Insight Coffee Roasters	Coffee Shop	8.7	0.34
	8.08	Wicked wich	Food Truck	8.5	0.46
	8.08	Southside Park	Park	7.8	0.46
	8.08	Capital Athletic Club	Gym / Fitness Center	7.8	0.06
	8.08	Chocolate Fish Coffee Roasters	Coffee Shop	7.6	0.43
Iron Point	8.02	Nike Factory Store	Sporting Goods Shop	8.5	0.07
	8.02	Century Folsom 14	Movie Theater	8.4	0.21
	8.02	Coach Factory Outlet	Accessories Store	8.1	0.19
	8.02	Gap Factory Store	Clothing Store	7.7	0.23
	8.02	Teriyaki Station	Asian Restaurant	7.4	0.14
University/65th St	7.92	Hornet Stadium	College Stadium	8.1	0.33
	7.92	Tower Brewing	Brewery	8.1	0.16
	7.92	The WELL at Sac State	College Gym	7.9	0.37
	7.92	Pita Pit	Sandwich Place	7.8	0.11
	7.92	Bikram Yoga Sacramento	Yoga Studio	7.7	0.17
Cordova Town Center	7.90	KP International Market	Supermarket	8.2	0.10
	7.90	Jamba Juice	Juice Bar	8.1	0.28
	7.90	MOD Pizza	Pizza Place	7.9	0.27
	7.90	El Puerto Mexican Restaurant	Mexican Restaurant	7.7	0.12
	7.90	New York Bagel	Bagel Shop	7.6	0.24
Sunrise	7.78	Brookfields Restaurant	American Restaurant	8.5	0.23
	7.78	Wendy's	Fast Food Restaurant	8.0	0.25
	7.78	California Family Fitness	Gym	7.9	0.47
	7.78	Formaggio Taverna and Patio	Italian Restaurant	7.3	0.13
	7.78	Certified Farmers' Market	Farmers Market	7.2	0.10
Mather Field/Mills	7.74	Starbucks	Coffee Shop	8.5	0.37
	7.74	Rosie's Country Kitchen	Coffee Shop	8.1	0.17
	7.74	Planet Fitness	Gym / Fitness Center	7.9	0.45
	7.74	Sunrise Waffles	Breakfast Spot	7.3	0.35

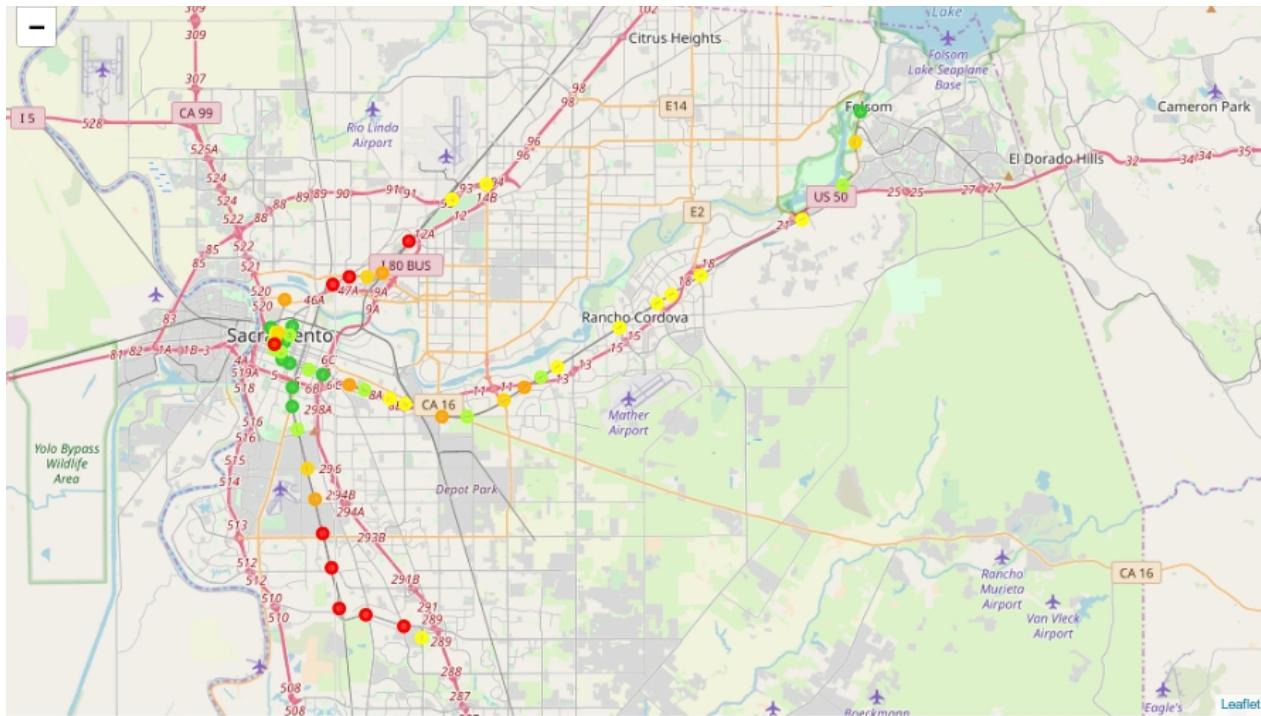
		Venue	Venue Category	Venue Rating	Distance
Station	Station Rating				
	7.74	See's Candies	Candy Store	6.9	0.47
Hazel	7.74	Cattlemens	Steakhouse	8.2	0.13
	7.74	The Old Spaghetti Factory	Italian Restaurant	8.1	0.18
	7.74	Rudy's Hideaway	Seafood Restaurant	8.1	0.30
	7.74	Starbucks	Coffee Shop	7.2	0.44
	7.74	Fort Rock Brewing	Brewery	7.1	0.16
Zinfandel	7.70	Panda Express	Chinese Restaurant	8.1	0.30
	7.70	Residence Inn Sacramento Rancho Cordova	Hotel	7.9	0.40
	7.70	Chipotle Mexican Grill	Mexican Restaurant	7.6	0.13
	7.70	Safeway	Grocery Store	7.5	0.15
	7.70	Walgreens	Pharmacy	7.4	0.19
Roseville Road	7.70	Haggin Oaks	Golf Course	8.5	0.39
	7.70	Haggin Oaks Golf Super Shop	Sporting Goods Shop	7.6	0.40
	7.70	Haggin Oaks Driving Range	Golf Driving Range	7.0	0.46
7th & I	7.70	Billy's Market & Deli	Deli / Bodega	7.7	0.07
59th Street	7.70	Corti Brothers	Grocery Store	8.7	0.20
	7.70	Talini's Nursery & Garden Center	Garden Center	7.7	0.31
	7.70	R/C Country Hobbies	Hobby Shop	7.4	0.25
	7.70	Papa Murphy's	Pizza Place	7.4	0.21
	7.70	Chipotle Mexican Grill	Mexican Restaurant	7.3	0.22
Butterfield	7.58	Mo Du Rang	Korean Restaurant	8.4	0.31
	7.58	West Wind Sacramento 6 Drive-In	Drive-in Theater	7.6	0.29
	7.58	Pho Bac Hoa Viet - Bradshaw	Vietnamese Restaurant	7.5	0.44
	7.58	Golden Bowls Mongolian Bar-B-Q	Asian Restaurant	7.2	0.27
	7.58	Peking Restaurant	Chinese Restaurant	7.2	0.27
Watt/I-80	7.56	The Gun Range	Gun Range	8.7	0.26
	7.56	Starbucks	Coffee Shop	7.7	0.09
	7.56	Powerhouse Science Center - Discovery Campus	Science Museum	7.4	0.46
	7.56	The Cheese Steak Shop	Sandwich Place	7.0	0.09
	7.56	Sacramento Softball Complex	Baseball Field	7.0	0.47
Cosumnes River College	7.50	Panda Express	Chinese Restaurant	8.1	0.33
	7.50	Suki Sushi	Sushi Restaurant	7.4	0.14
	7.50	Popeyes Louisiana Kitchen	Fried Chicken Joint	7.4	0.19
	7.50	Target	Big Box Store	7.3	0.42

		Venue	Venue Category	Venue Rating	Distance
Station	Station Rating				
	7.50	Starbucks	Coffee Shop	7.3	0.42
Glenn	7.48	Out of Bounds Brewing Company	Brewery	8.2	0.31
	7.48	The Original Mel's Diner	Diner	7.9	0.48
	7.48	ampm	Convenience Store	7.4	0.40
	7.48	The Waffle Experience	Breakfast Spot	7.4	0.33
	7.48	Harley-Davidson of Folsom	Motorcycle Shop	6.5	0.46
Fruitridge	7.46	La Esperanza	Supermarket	7.9	0.44
	7.46	River City Gun Exchange	Sporting Goods Shop	7.5	0.21
	7.46	Lalo's Restaurant	Mexican Restaurant	7.3	0.32
	7.46	Jointed Cue	Pool Hall	7.3	0.22
	7.46	Dairy Queen	Fast Food Restaurant	7.3	0.12
Watt/Manlove	7.44	El Favorito Taqueria	Mexican Restaurant	7.8	0.05
	7.44	Ninja Sushi	Sushi Restaurant	7.5	0.22
	7.44	The Philadelphia Cheesesteak Co	Sandwich Place	7.3	0.28
	7.44	YD House (Young Dong)	Korean Restaurant	7.3	0.31
	7.44	Hong Kong House	Chinese Restaurant	7.3	0.06
Royal Oaks	7.34	Chando's Tacos	Mexican Restaurant	8.6	0.05
	7.34	The Bolt	Gay Bar	7.5	0.43
	7.34	Popeyes Louisiana Kitchen	Fried Chicken Joint	7.2	0.37
	7.34	Grocery Outlet Bargain Market	Grocery Store	6.8	0.31
	7.34	Wienerschnitzel	Hot Dog Joint	6.6	0.36
8th & H	7.15	La Bonne Soupe Cafe	Soup Place	8.2	0.11
	7.15	524 Mexican Restaurant	Mexican Restaurant	6.1	0.37
Swanston	6.94	Harley Davidson of Sacramento	Motorcycle Shop	8.1	0.23
	6.94	River City Phoenix	Marijuana Dispensary	7.8	0.42
	6.94	Hilton Sacramento Arden West	Hotel	6.6	0.33
	6.94	Sears Outlet	Outlet Store	6.5	0.34
	6.94	Harvard Street Grille	American Restaurant	5.7	0.33
Power Inn	6.92	Starbucks	Coffee Shop	7.4	0.38
	6.92	Starbucks	Coffee Shop	7.2	0.15
	6.92	El Pollo Loco	Fast Food Restaurant	6.9	0.35
	6.92	Hertz Rent a Car	Rental Car Location	6.6	0.46
	6.92	Wendy's	Fast Food Restaurant	6.5	0.15
47th Ave	6.80	Laos Kitchen	Thai Restaurant	7.3	0.45
	6.80	JR's Texas Bar-B-Que	BBQ Joint	6.3	0.24

		Venue	Venue Category	Venue Rating	Distance
Station	Station Rating				
Township 9	6.75	Smart Foodservice Warehouse Stores	Warehouse Store	7.6	0.39
	6.75	Linda Taqueria	Mexican Restaurant	6.6	0.42
	6.75	SUBWAY	Sandwich Place	6.5	0.33
	6.75	FedEx	Shipping Store	6.3	0.16
39th Street	6.67	Sunshine Cafe	Café	7.2	0.46
	6.67	Starbucks	Coffee Shop	6.7	0.27
	6.67	SUBWAY	Sandwich Place	6.1	0.30
Starfire	6.50	Baskin-Robbins	Ice Cream Shop	6.7	0.27
	6.50	SUBWAY	Sandwich Place	6.5	0.32
	6.50	7-Eleven	Convenience Store	6.3	0.24
Arden/Del Paso	6.44	GOOD: Street Food + Design Market	Food Truck	7.2	0.21
	6.44	Stoney's Rockin Rodeo	Bar	6.4	0.27
	6.44	Thrift Town	Thrift / Vintage Store	6.3	0.29
	6.44	Iceland Skating Rink	Skating Rink	6.2	0.16
	6.44	KFC	Fried Chicken Joint	6.1	0.07
Center Parkway	6.40	North Laguna Creek Park	Park	6.4	0.45
Florin	6.32	Wienerschnitzel	Hot Dog Joint	6.8	0.46
	6.32	U-Haul Moving & Storage at Florin Rd	Storage Facility	6.5	0.17
	6.32	Adalberto's Mexican Food	Mexican Restaurant	6.4	0.42
	6.32	Little Caesars Pizza	Pizza Place	6.0	0.18
	6.32	Church's Chicken	Fried Chicken Joint	5.9	0.16
Marconi	6.00	7-Eleven	Convenience Store	6.0	0.33

Map 2, below, highlights the stations that have the best rated destinations. The stations with the best-rated destinations are in green, stations with mid-ranged rated venues are yellow and the stations with the worst rated destinations are in red. The station rating is based on the mean average of the five best venues within one-half mile of the light rail station.

Map 2 – Light Rail Stations Highlighting Stations with Highest Rated Venues



The best-rated stations are in the downtown area, expanding down to City College and out in Historic Folsom to the east.

Interactive maps that display recommended venues where the venue's name, category, and rating appear when the marker is clicked on can provide helpful information to riders. There is a large group of recommended venues in the downtown area. Map 3, below, displays the venues on the "Grid" in Sacramento that have a rating of 8.8 or higher. Each marker color represents a specific light rail station. In Map 3, the venue Pipeworks is selected where the venue name, rating, closest light rail station, and venue category appear.

Map 3 – Closer Look at Top-Rated Venues Near Downtown Sacramento

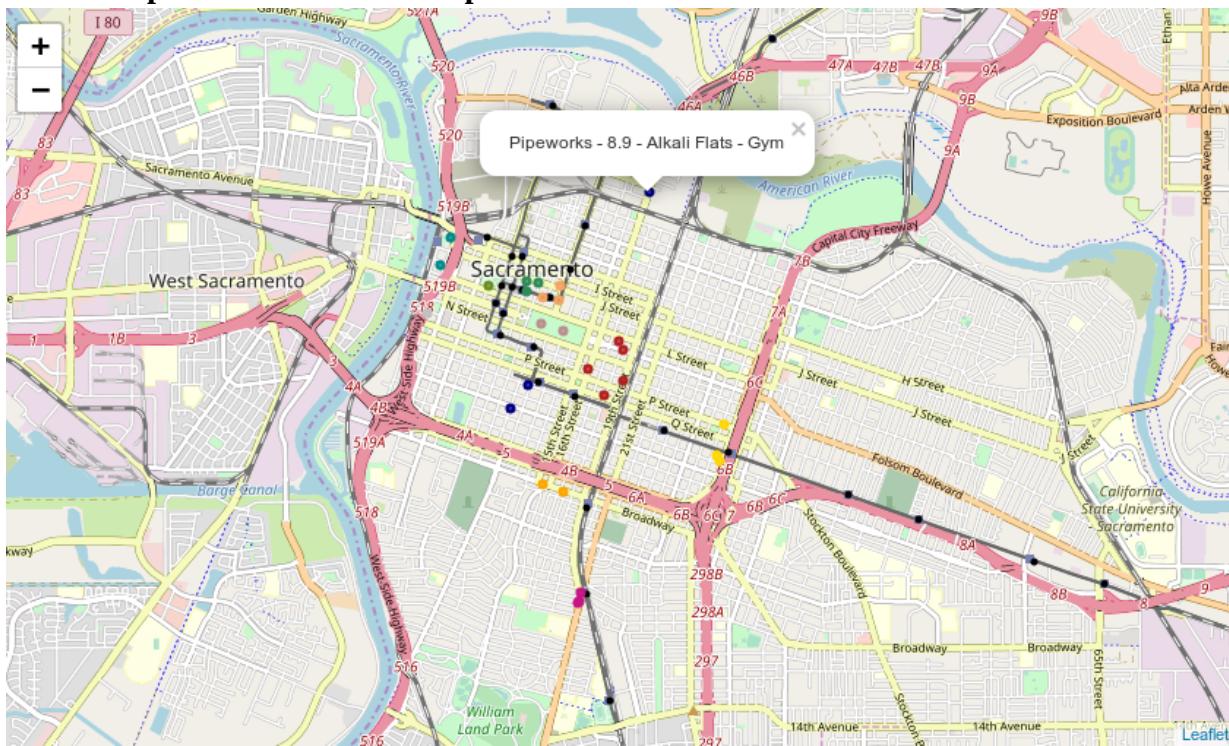


Table 5 below shows the variety of destinations the light rail has to provide among its highest rated venues. Many of the destinations are around food and beverage venues. There are also museums, fitness, and entertainment options.

Table 5 – Count of Venues with Rating of 88 or Greater by Venue Category

Venue Category	Station
	Count
Coffee Shop	3
American Restaurant	2
Grocery Store	2
Sushi Restaurant	2
New American Restaurant	2
Vegetarian / Vegan Restaurant	1
Southern / Soul Food Restaurant	1
Sandwich Place	1
Salon / Barbershop	1
Pizza Place	1
Park	1
Mexican Restaurant	1
History Museum	1
Gym	1

Venue Category	Station
	Count
Gastropub	1
Art Museum	1
Garden Center	1
Ethiopian Restaurant	1
Diner	1
Capitol Building	1
Café	1
Bridal Shop	1
Brewery	1
Basketball Stadium	1
Bar	1
Bakery	1
Yoga Studio	1

Discussion

This exercise shows there are many destinations that Regional Transit can promote to improve ridership. This information used by a marketing team could entice more people to ride the light rail to improve ridership.

Regional Transit can take this information to improve the perceived value of the light rail. The light rail provides convenient transit to these destinations that include top-rated restaurants, museums, bars, grocery stores, fitness centers, and more by simply hopping on the light rail to enjoy at one's leisure, on the weekend, or after work.

Each station has its own personality shown by this guide of highly rated venues near the light rail stations.

Come downtown to enjoy a concert or basketball game at the new arena, some fine dining at a new popular restaurant called Mother, without worrying about parking or having a designated driver.

Conclusion

Sacramento's light rail system lacks popularity because there is little knowledge provided about popular destinations riders can enjoy by riding. Each station has its own special opportunities to enjoy at one's leisure. However, riders are not aware of them. With this exercise, we are able to provide

riders, guests, and residents the opportunities for having a fun night just by taking the light rail train and not having to worry about parking. The information could entice people to visit a new area of Sacramento to enjoy what it has to offer, from Historic Folsom to downtown, and to south Sacramento's Broadway and Curtis Park areas, and everything in between. When someone is looking for something new to do in Sacramento they could get the idea from Regional Transit with knowledge it's attainable by riding the light rail.

Appendix

Table 6 – List of Stations and Location Coordinates from SACOG

	Station	Latitude	Longitude		Station	Latitude	Longitude	
0	12th & I	38.581450	-121.489901		27	Cordova Town Center	38.598664	-121.282923
1	13th Street	38.571112	-121.493731		28	Cosumnes River College	38.453782	-121.418367
2	16th Street	38.569836	-121.489329		29	Florin	38.497674	-121.471506
3	23rd Street	38.566692	-121.478992		30	Franklin Blvd	38.463078	-121.448484
4	29th Street	38.564645	-121.471397		31	Fruitridge	38.525107	-121.479947
5	39th Street	38.560764	-121.457246		32	Glenn	38.662942	-121.183605
6	47th Ave	38.511909	-121.475913		33	Globe	38.602704	-121.466244
7	48th Street	38.558512	-121.449025		34	Hazel	38.630419	-121.212227
8	4th Ave/Wayne Hultgren	38.551589	-121.488083		35	Historic Folsom	38.675963	-121.180572
9	59th Street	38.554650	-121.435527		36	Iron Point	38.644601	-121.190146
10	7th & Capitol	38.578333	-121.498680		37	Marconi	38.621240	-121.424940
11	7th & I	38.582659	-121.496810		38	Mather Field/Mills	38.584743	-121.311311
12	7th & K	38.580024	-121.497950		39	Meadowview	38.483184	-121.467090
13	8th & Capitol	38.577472	-121.497785		40	Morrison Creek	38.465943	-121.463007
14	8th & H	38.582677	-121.495491		41	Power Inn	38.547272	-121.407402
15	8th & K	38.579778	-121.496732		42	Roseville Road	38.638707	-121.401523
16	8th & O	38.575467	-121.498100		43	Royal Oaks	38.606189	-121.447863
17	9th & K	38.579548	-121.495488		44	Sac Valley	38.584416	-121.499643
18	Alkali Flats	38.585414	-121.488182		45	Starfire	38.559341	-121.362386
19	Archives Plaza	38.574374	-121.494218		46	Sunrise	38.606675	-121.266968
20	Arden/Del Paso	38.606308	-121.457145		47	Swanston	38.607640	-121.439639
21	Broadway	38.559568	-121.488015		48	Tiber	38.563891	-121.353408
22	Butterfield	38.567804	-121.344592		49	Township 9	38.596426	-121.491984
23	Cathedral Square	38.578855	-121.492340		50	University/65th St	38.552615	-121.427322
24	Center Parkway	38.458386	-121.427818		51	Watt/I-80	38.645119	-121.383441
25	City College	38.541886	-121.485279		52	Watt/Manlove	38.553842	-121.373338
26	College Greens	38.547067	-121.393688		53	Zinfandel	38.594961	-121.290724