

# MENARA

First and Only Web App for House Price Estimation, Forecast and GreatSchools Search



San Francisco - The Painted Ladies

# Introduction

Whether you want to buy, sell, refinance, or even remodel a home, **MENARA** offers many resources, estimates and forecasts to help you make the most informed decision. With a user-friendly interface, and offering many resources for buyers, sellers, and landlords alike. **MENARA** offers:

- The lowest 8.5% margin off-error for off-market homes in North California (***Competitive to the most known Home Estimate Sites e.g., [Redfin](#)***) by using the most sophisticated Machine learning algorithms.
- A golden opportunity to give you a sneak peek into the future; Up to 14 Months of house price forecast per zipcode by using a new model called **Neural Prophet**.
- A unique access to [GreatSchools](#); the most trusted source of schools rating for many buyers and not just buyers with children because at **MENARA** we KNOW that “location, location, location,” means “schools, schools, schools.”

## House Price Estimation

At **MENARA**, since the beginning, we made our mind to be unique in approaching this typical supervised machine learning problem, so here are the main reasons why you should trust our app:

- Built our dataset from scratch, utilizing multiple reliable sources (e.g., [redfin](#), [realtor](#), [GreatSchools API](#),... etc). For more details, check [Data Wrangling](#).
- Applied state of the art techniques in feature engineering: integrated Unsupervised Machine Learning - Clustering using K-Means and used Haversine Formula with Python to create crucial features in order to improve our final ML Model.
- Selected Stacking Regressor as our final Model because it managed to make predictions that have better performance than any single models we trained. So, in Stacking, we used a meta-learning algorithm (Ridge) to learn how to best combine the predictions from Four ML Algorithms (Random Forest, GB, XGBoost and LightGBM).

Get Estimated Market Value

Average House Price: \$967,822.75

Estimated Sales Price Range: \$867,516.22 - \$1,087,062.84

### Enter House Details:

Living Space - Sqft?

2215-+

Lot Size?

2215-+

Property Type

Townhouse

Num of Bedrooms

4

### Enter Neighborhood Details:

Median sqft Price?

480-+

GreatSchools Rating?

9-+

Annual Income?

149500-+

Zip Code

94568

## Median House Price Forecast Per Zip Code

If you're interested in buying or selling a house in 2021/2022, then, **MENARA** is offering a golden opportunity to give you a sneak peek into the future; Up to 14 Months of house price forecast per zipcode by using a new model called **Neural Prophet**. This model is a Neural Network based Time-Series Model, built on top of PyTorch and is heavily inspired by Facebook Prophet and AR-Net libraries ([Neural Prophet Site](#)).

For the Data used in **Neural Prophet**, we're utilizing multiple reliable sources (e.g., [redfin](#) and [realtor](#)), because they have direct access to data from local multiple listing services, as well as insight from their real estate agents across the country.

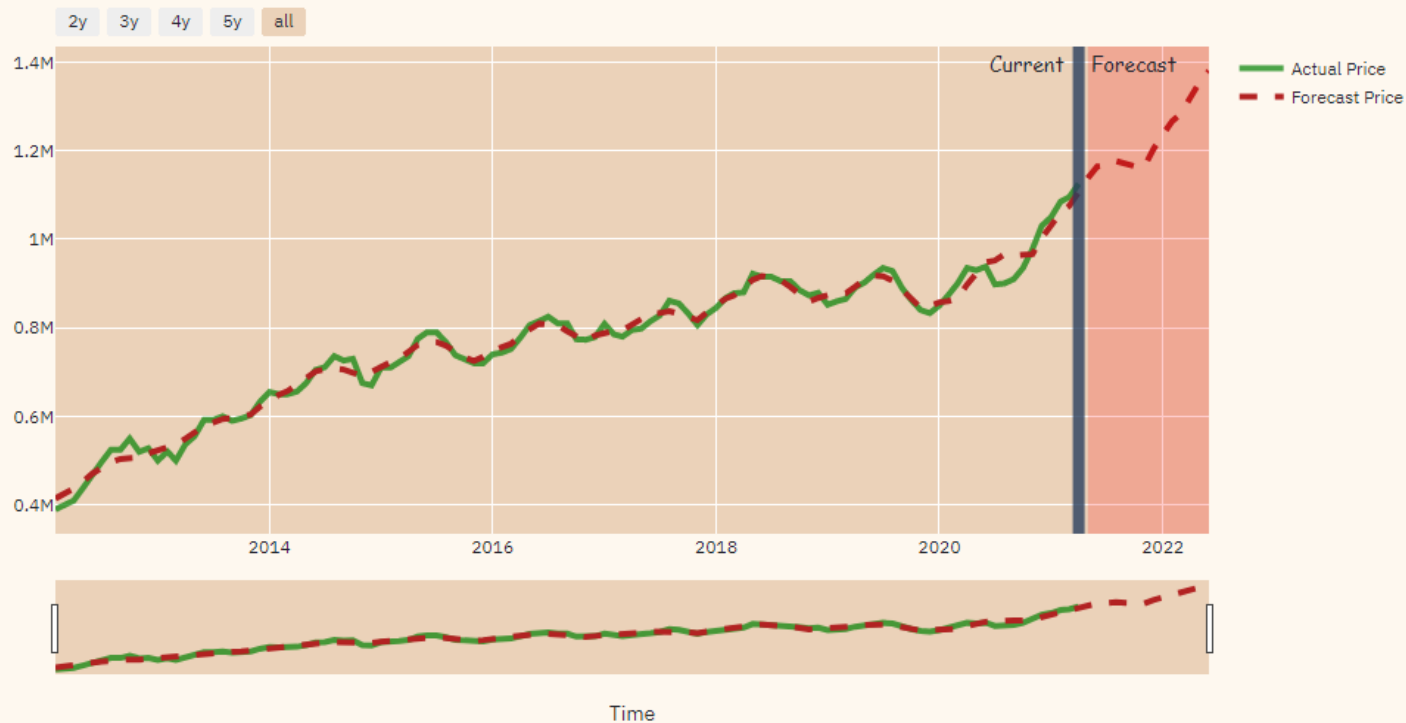
### Enter Zipcode to Forecast:

Select Zipcode

94568

Get Zip Code Median House Price Forecast

House Sale Price Actual vs Forecast [Neural Prophet]



### Zip code Insights based on Neural Prophet Forecast

For the selected zipcode: 94568 , Our Forecast Model is expecting to have:

- 17.10 % in 2021/2022 compared to 2019/2020!
- -0.30 % in Q3 of 2021!
- 6.00 % in Q4 of 2021!
- 6.80 % in Q1 of 2022!
- 4.60 % in Q2 of 2022!

Woow, That's Awesome!. According to our Forecast Model, the median house price for the selected Zipcode is expected to grow more than 15% in 2021/2022 compared to 2019/2020 🚀🚀.



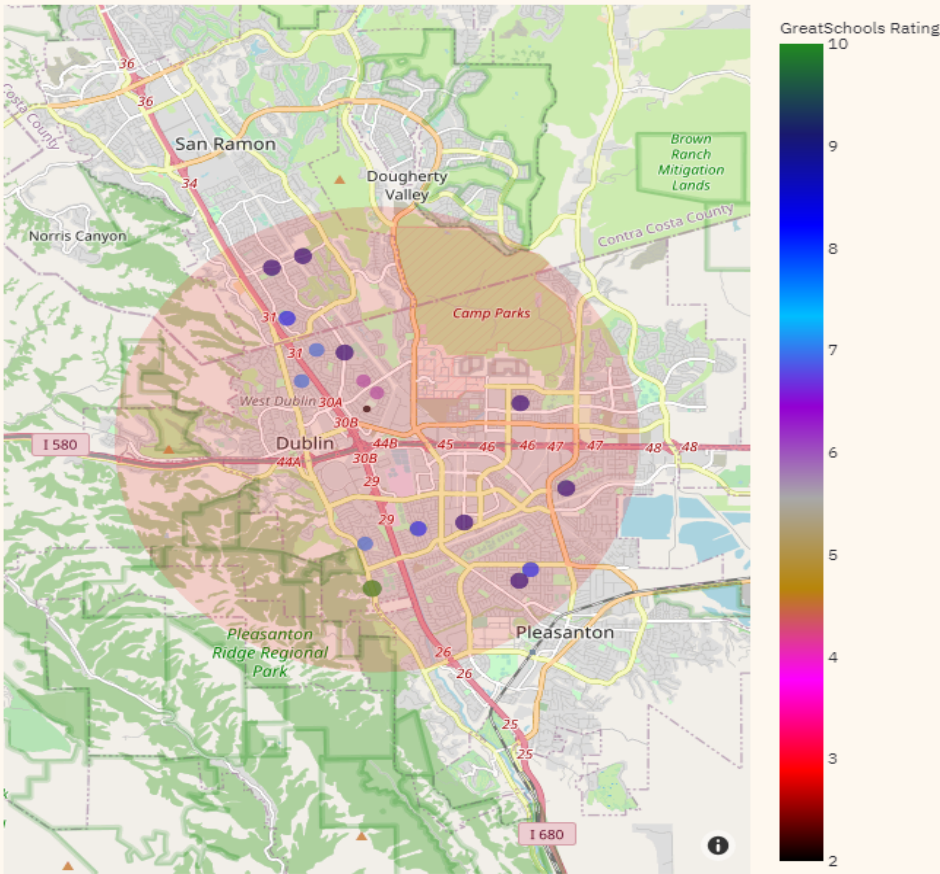
## GreatSchools Search

Most buyers understand that they may not be able to find a home that covers every single item on their wish list, but new survey data from [realtor](#) shows that school districts are an area where many buyers aren't willing to compromise. For many buyers and not just buyers with children, "location, location, location," means "schools, schools, schools."

Good schools desire by **78%** of buyers makes [GreatSchools](#) the trusted source of schools rating for many parents and the partner of choice for so many leading real estate websites (e.g., redfin, zillow, realtor) simply because **GreatSchools** are the nation's leading source of school performance information and offer the most comprehensive set of school data available. Last year, **GreatSchools** had more than 55 million unique visitors, including over half of American families with school-age children.

Special Thanks to **GreatSchools**, in particular Lindsay Zavala - Partnership Manager for providing a **free API trial key**. REST API access was essential to request GreatSchools Rating of all schools in specific zipcodes/Cities in North California.

Schools per GreatSchools Rating



### Enter Search Location:

Address

200 Civic Plaza, Dublin, CA, 94568

School Search [miles]

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Search Schools

### All Rated Schools within search location:

	School Name	gradeRange	GreatSchools Rating	Students	distance_miles
	Fairlands Elementary School	KG_5	9	767	2.5300
	Harvest Park Middle School	6_8	8	1223	2.7300
	James Dougherty Elementary School	KG_5	9	890	1.9100
	Walnut Grove Elementary School	KG_5	9	749	2.7400
	Thomas S. Hart Middle School	6_8	9	1201	1.6400
	Donlon Elementary School	KG_5	8	758	1.4000
	Wells Middle School	6_8	6	996	0.6700
	Foothill High School	9_12	10	2178	2.1600
	Valley High (Continuation) School	9_12	2	60	0.4600

### Schools Insights based on Search Location:

- Within 3 miles of the search location , There are 17 Schools, where The closest is within 0.46 miles and The farthest is within 2.83 miles
- For the above 17 Schools, the GreatSchools Rating Range is between: 2 - 10 , and the average GreatSchools Rating is 7.76 .
- The Average Students enrolled in these 17 Schools, is: 993 Students.

### Now let's compare your search location's result with the entire zipcode:

- For zipcode 94568 , the GreatSchools Rating Range is between: 1 - 10 , and the average GreatSchools Rating is 5.41 .
- The Average Students enrolled in zipcode 94568 is: 694 Students.

That's Awesome!, looks like Average GreatSchools Rating in your search location is better than the entire zipcode. lucky! you nailed it first time 😊.