

IMMIGRATING TO THE UNITED STATES

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WHAT ARE WE LOOKING AT?

We're focusing on US Immigration over 15 years from 8 countries specifically:

- China, Dominican Republic, United Kingdom, Mexico, Iran, India, Pakistan and Philippines

From those countries:

- How many people are migrating to the US?
- Which state are they settling to?

DID YOU KNOW?

- * Almost 20% of the world's migrants live in the United States
- * There are 45.3 million immigrants in the United States as of 2021
- * That's 13.6% of the total U.S. population, just below the 13.7% high in 2019.
- * People from Mexico, China, and India are the largest US immigrant groups
- * About 51% of all U.S. immigrants were female in 2021
- * 18 million out of 69.7 million U.S. children under the age of 18 lived with at least one immigrant parent in 2021

*US Census Bureau

The background is a light cream color with a stylized map of the United States in a light pink hue. Various colorful icons are scattered across the map, including blue and orange clouds, a blue evergreen tree, a red deciduous tree, a yellow tree, and a compass rose in the bottom right corner. Orange lines with dots suggest travel routes.

1,031,765

people immigrated to the US and became permanent residents in
2019

WHAT IS OUR GOAL?

We're trying to predict how many immigrants from our chosen countries are becoming permanent residents in the next couple years and which state they're residing in

So for example: ~10,000 people from China are migrating to California in 2024

And we'll do this for each of our 8 countries, for all 50 states.

WHERE DID WE GET OUR DATA FROM?

DEPARTMENT OF HOMELAND SECURITY

US Immigration
data for the last 15
years

US CENSUS BUREAU

US State and
demographic data

WORLD BANK GROUP

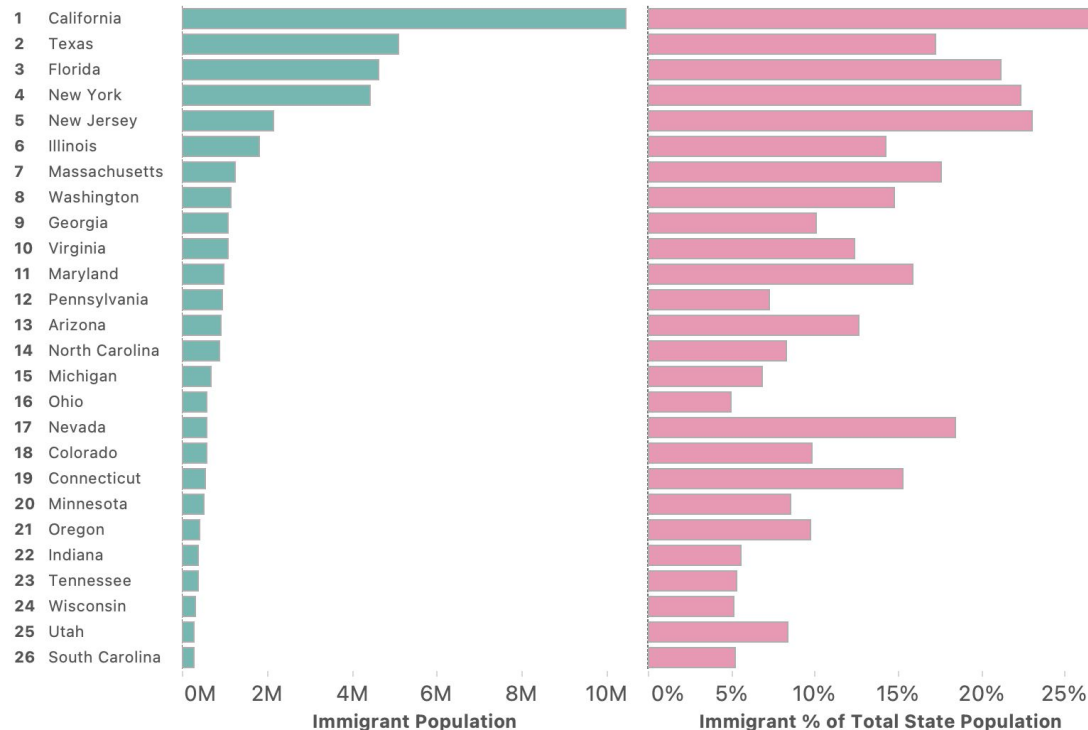
Data for our 8
countries, like their
GDP

The background features a light cream color with abstract, organic shapes in shades of pink and blue. In the top left, there is a blue landmass with a black compass rose icon. Below it is an orange tree icon. In the top right, a dashed orange line with a dot at the end curves across the frame, accompanied by a small blue cloud icon. In the bottom left, there is a red tree icon. In the bottom right, there are orange shapes resembling mountains or landmasses.

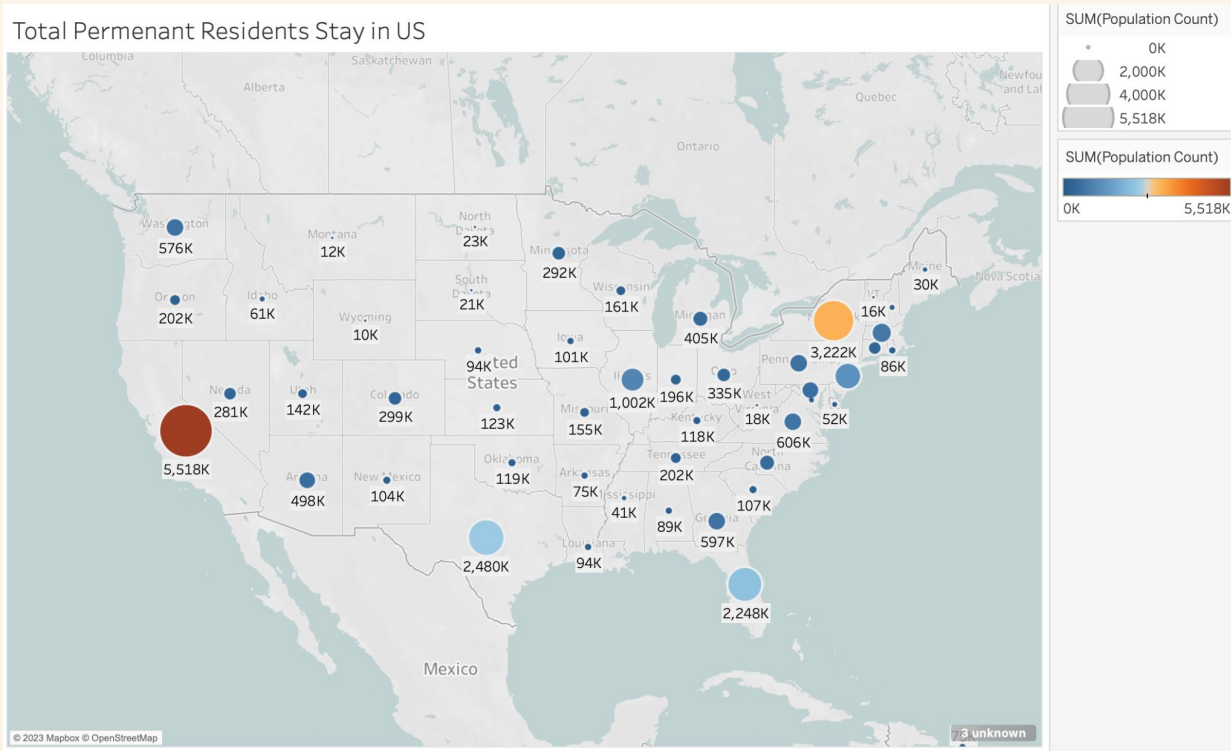
A BETTER LOOK AT OUR DATA

IMMIGRANT POPULATION BY STATE

Immigrant Population and Share of Total Population by U.S. State, 2021



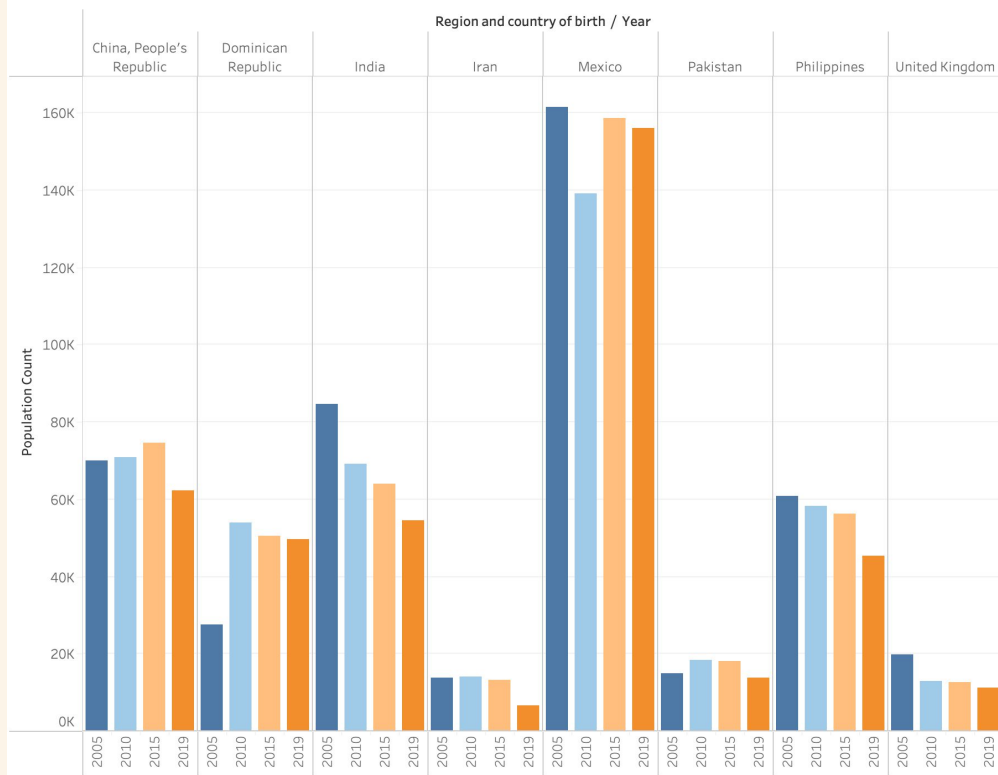
PERMANENT RESIDENTS BY STATE



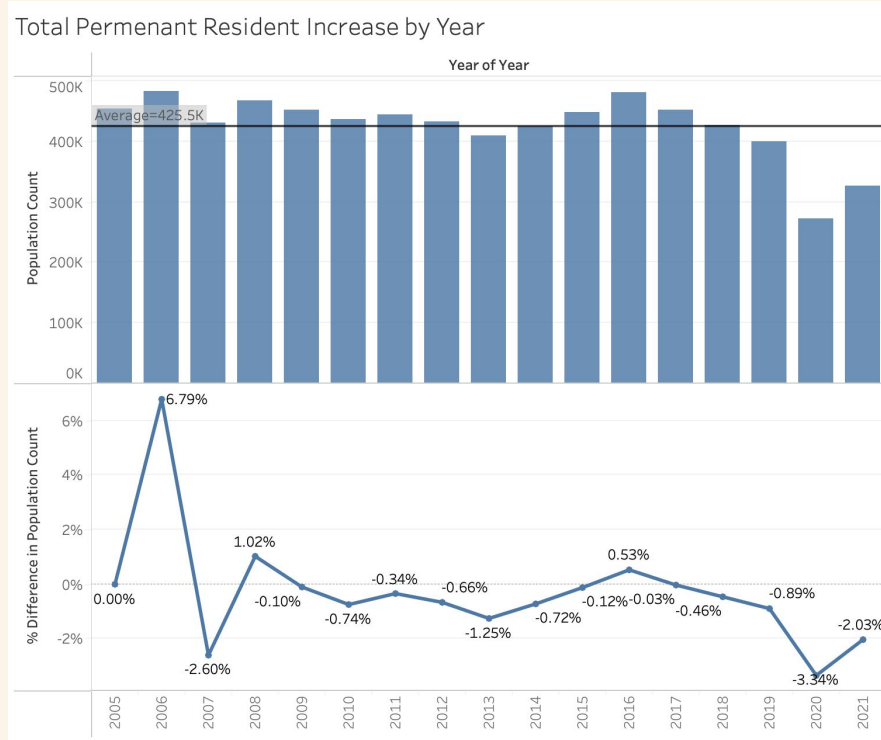


IMMIGRANT POPULATION BY COUNTRY

U.S. Immigration Population by Country of Birth
2005, 2010, 2015, 2019



US PERMANENT RESIDENT RATE





HOW DID WE DERIVE OUR PREDICTIONS?

We modeled our data with linear regression, neural networks, Prophet model, ARIMA, SARIMAX and Random Forest.

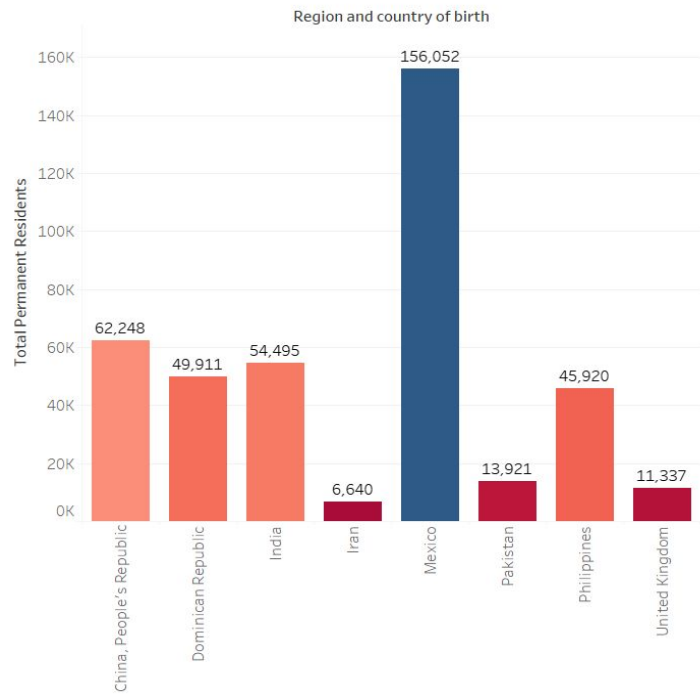
Linear Regression has shown the best performance.

TESTING OUR MACHINE LEARNING MODEL

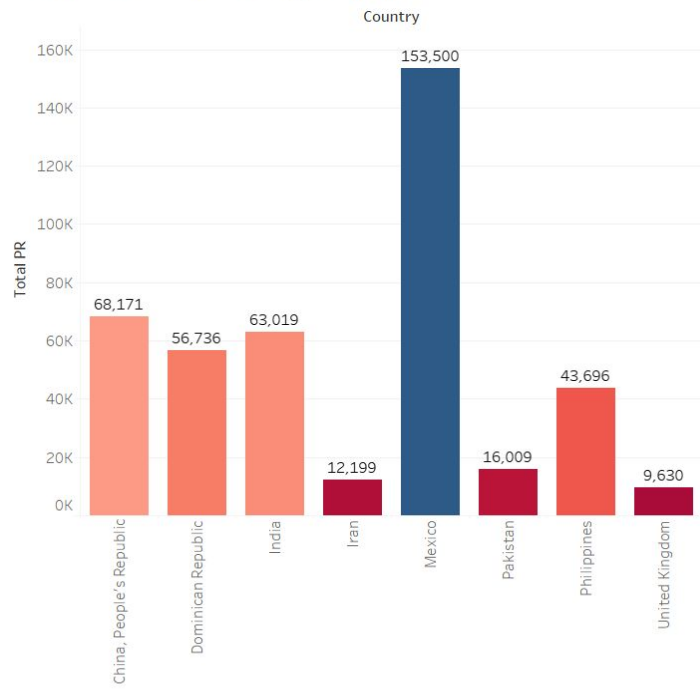


LINEAR REGRESSION OUTCOMES

Actual data 2019



Predicted 2019 LinearRegression



EXAMPLE: United Kingdom, California

	Linear Regression	Prophet	ARIMA	Random Forest	SARIMAX	Neural Networks
Data 2019	2149	2149	2149	2149	2149	2149
Predicted 2019	2100	1865	2355	2009	2472	2364
MAE	100.88	283	293.36	209.19	189.47	88.44
MAPE	4.16%	13.19%	12.28%	8.17%	7.84%	3.65%
MSE	15330	80441.70	87125.83	61996.11	38219.18	14287.38
RMSE	120	283	295	248.99	195.49	119.53
CVRMSE	5.13%	13.19%	12.24%	10.17%	8.10%	4.96%

An illustration of a woman in a yellow hijab and orange dress carrying a blue water container on her back, walking hand-in-hand with a young girl in a blue dress. They are walking along a dashed orange line that leads towards the top left. The background is a light cream color with various abstract shapes and stylized trees in pink, blue, and orange. A compass rose is located in the bottom right corner.

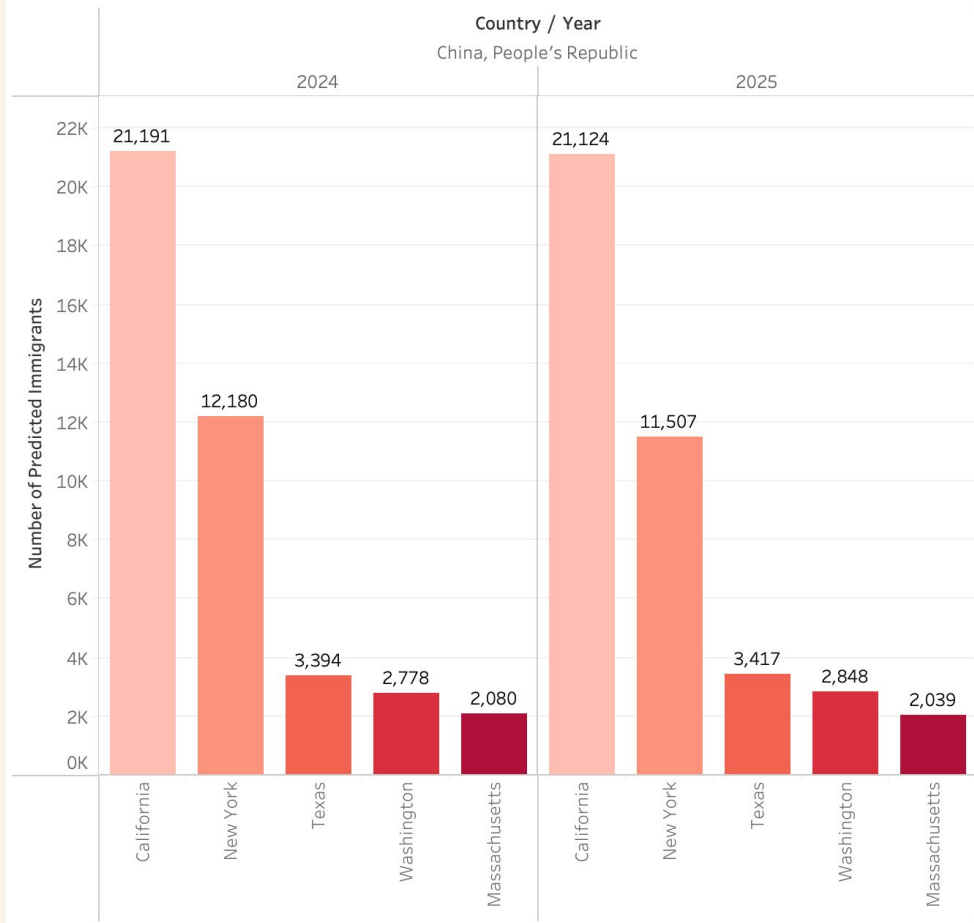
OUR FINDINGS



Using linear regression, we were able to predict the number of immigrants from our 8 countries, and how many of them are settling in each state.

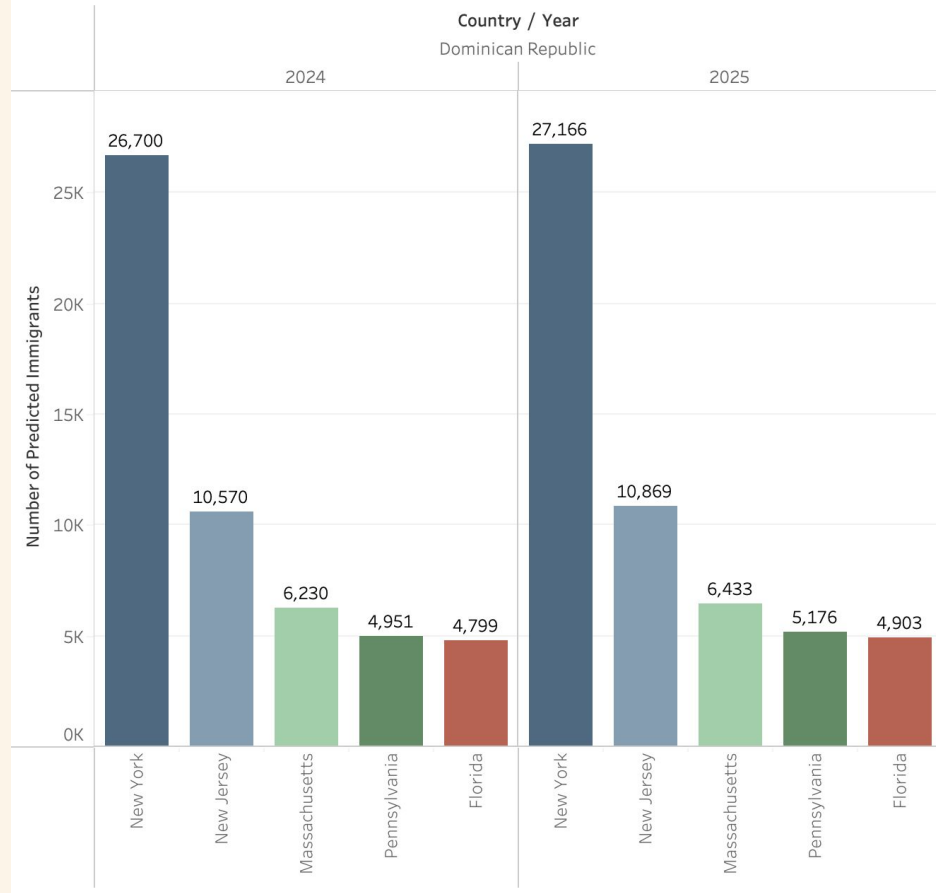
Predictions for immigrants from China in 2024 and 2025

Top 5 States - China

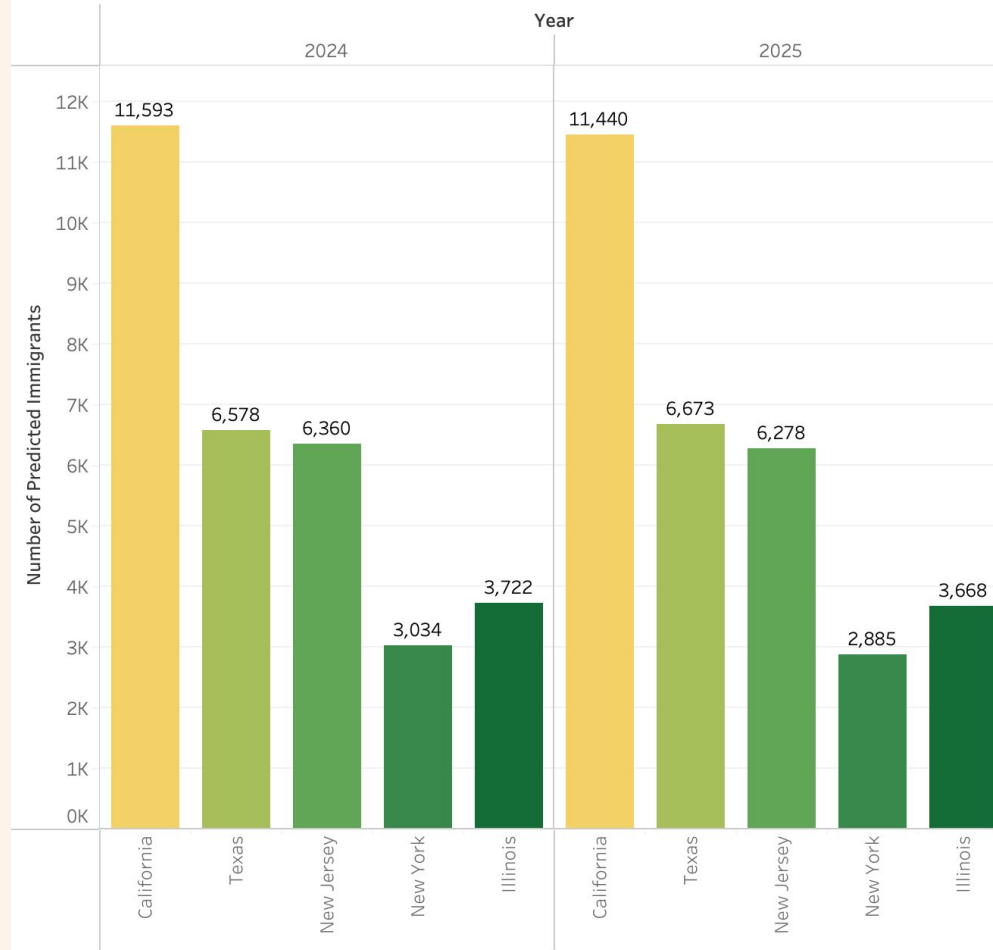


Predictions for immigrants from Dominican Republic in 2024 and 2025

Top 5 States - Dominican Republic

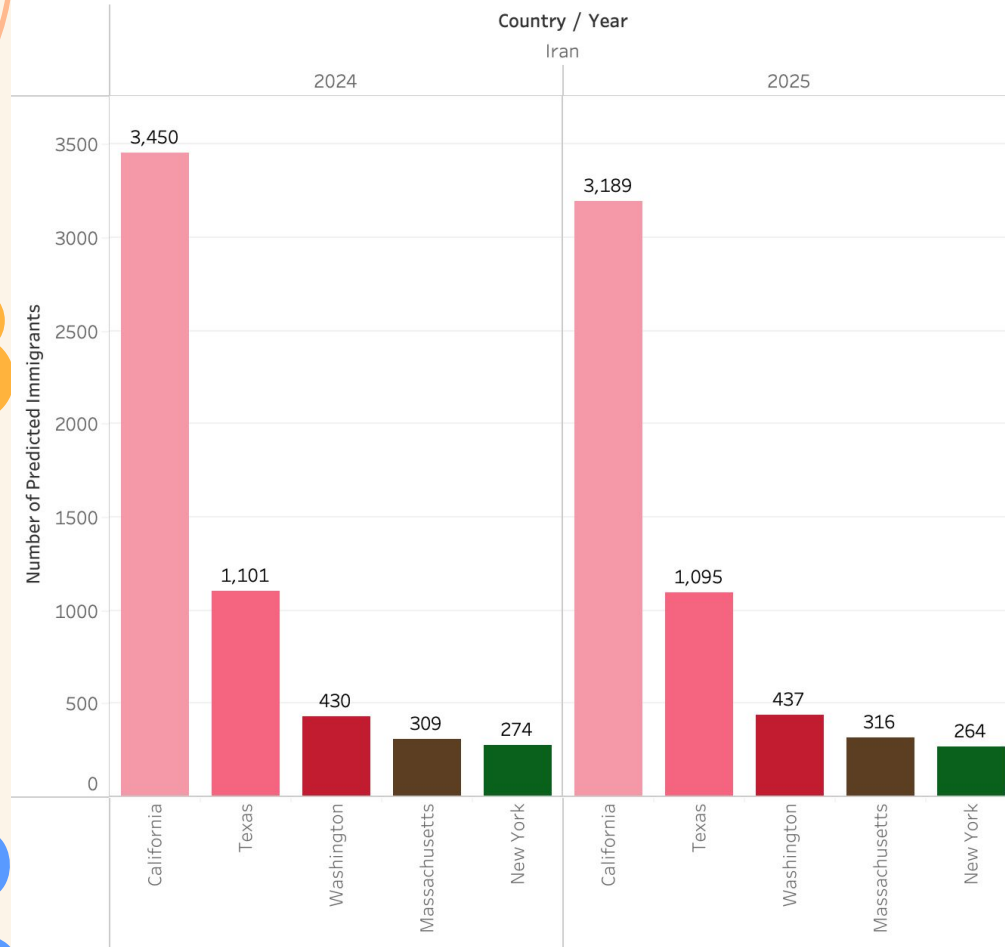


Top 5 States - India



**Predictions for
immigrants from India
in 2024 and 2025**

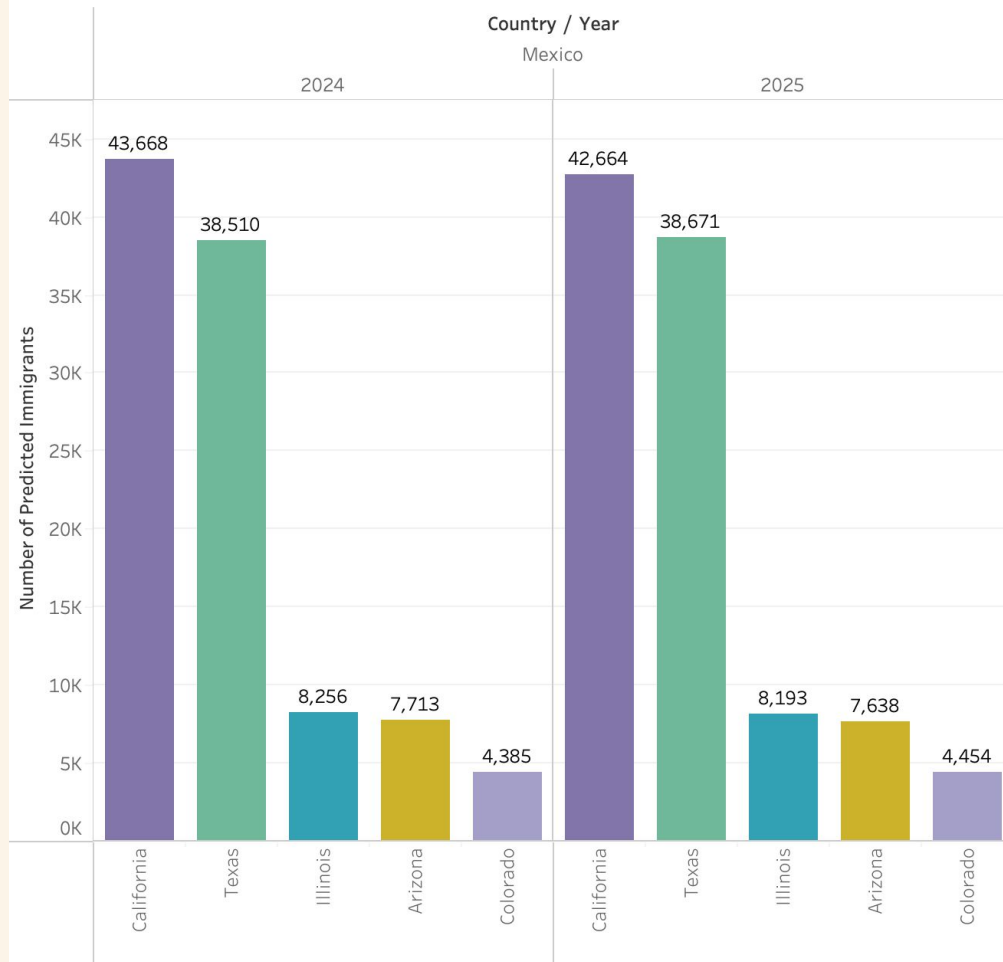
Top 5 States - Iran



**Predictions for
immigrants from Iran
in 2024 and 2025**

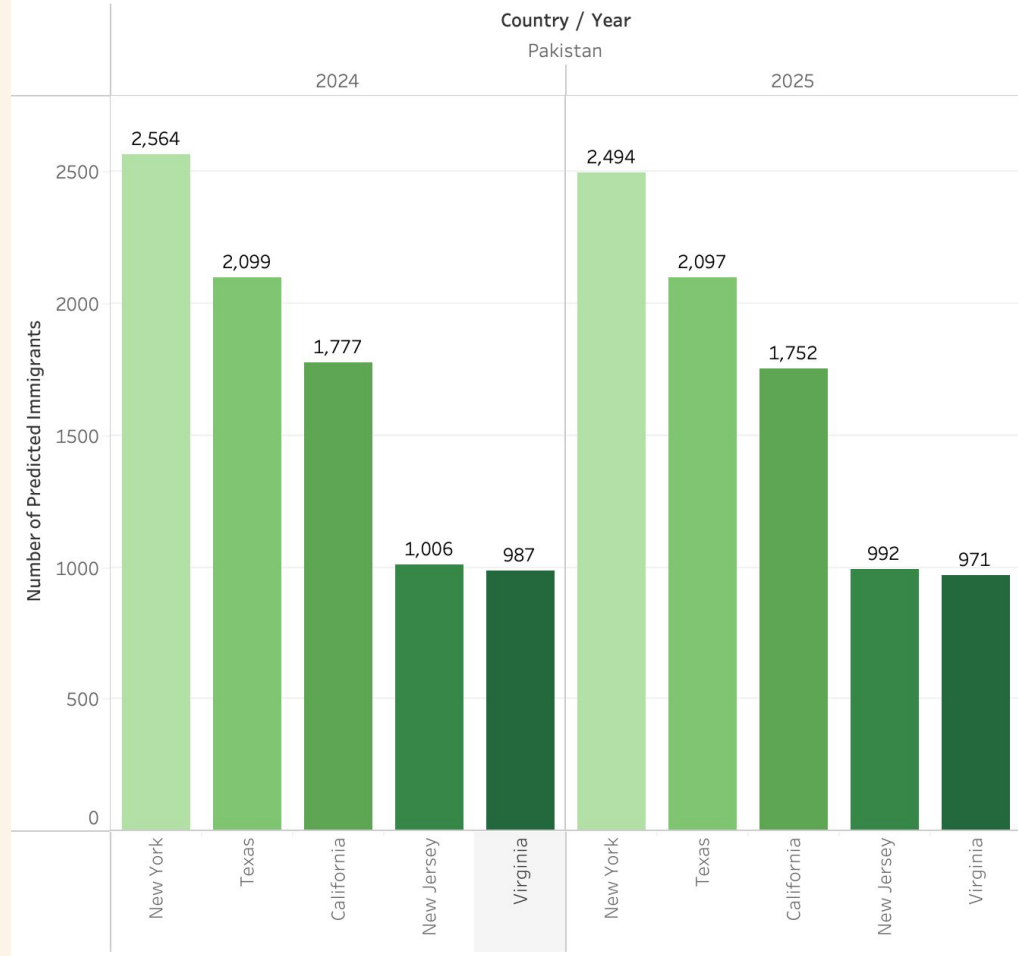
Predictions for immigrants from Mexico in 2024 and 2025

Top 5 States - Mexico

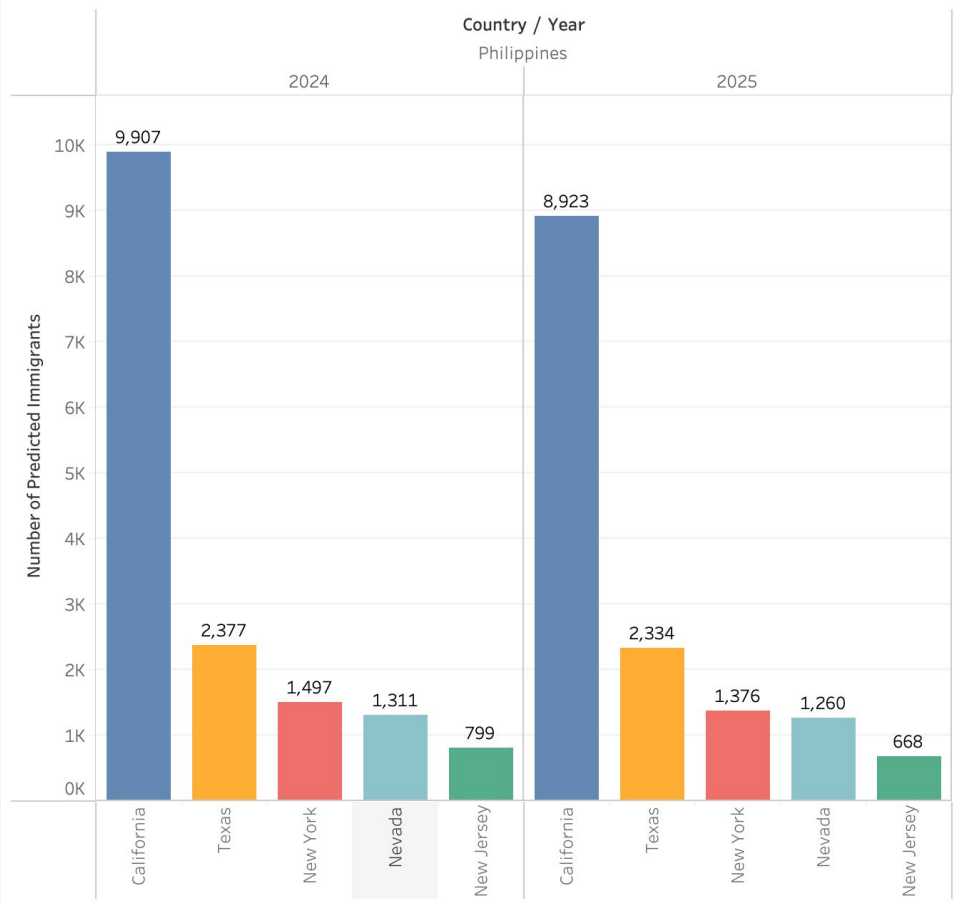


Predictions for immigrants from Pakistan in 2024 and 2025

Top 5 States - Pakistan

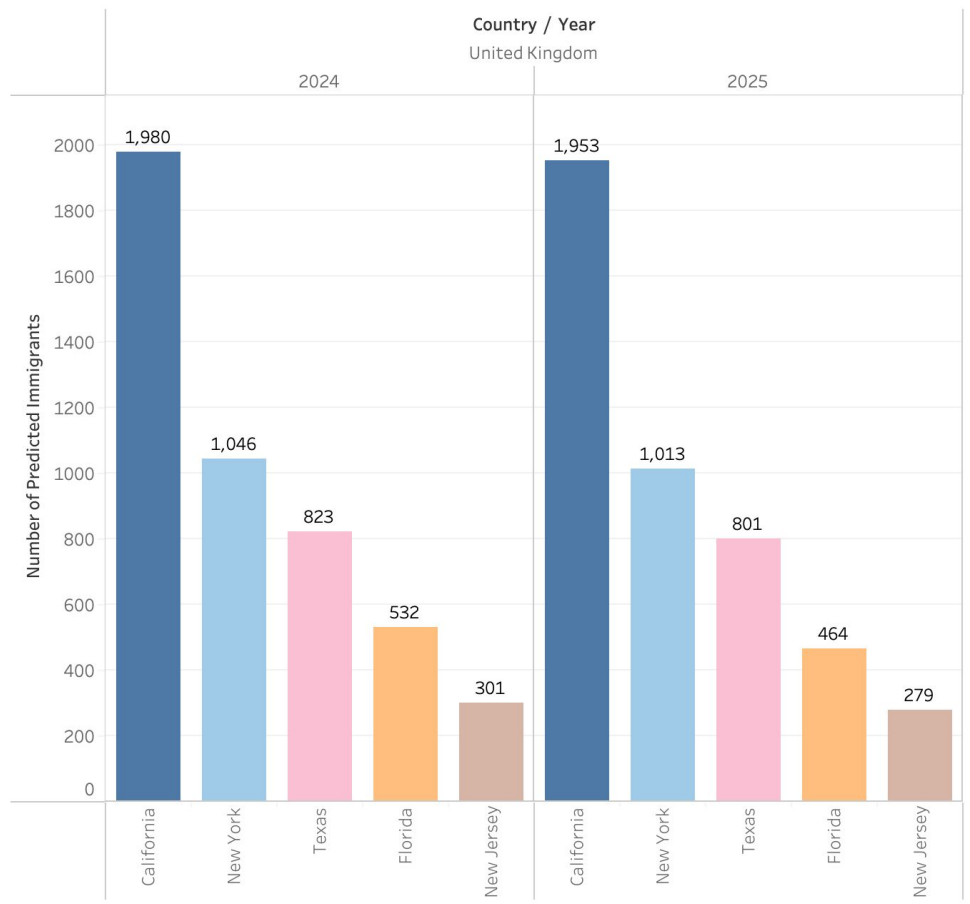


Top 5 States - Philippines



**Predictions for
immigrants from
Philippines in
2024 and 2025**

Top 5 States - United Kingdom



**Predictions for
immigrants from
United Kingdom
in 2024 and 2025**

SUMMARY OF FINDINGS

- From our 8 countries, the top 5 states vary slightly with California, New York, New Jersey and Texas almost always being present.
- For the same 4 states above, immigrants make up more than 20% of their state population.
- Based on our predicted data, we can see that there will be an increase of Chinese and Indian immigrants from their previous years – majority of both settling in California.
- We're also predicting that the number of Iranian, Filipino, Mexican and British immigrants will stay roughly the same as their previous years.
- Pakistani immigrants, in contrast, are the only group we predict will decrease in its number.

**THANKS
FOR
LISTENING!**

