



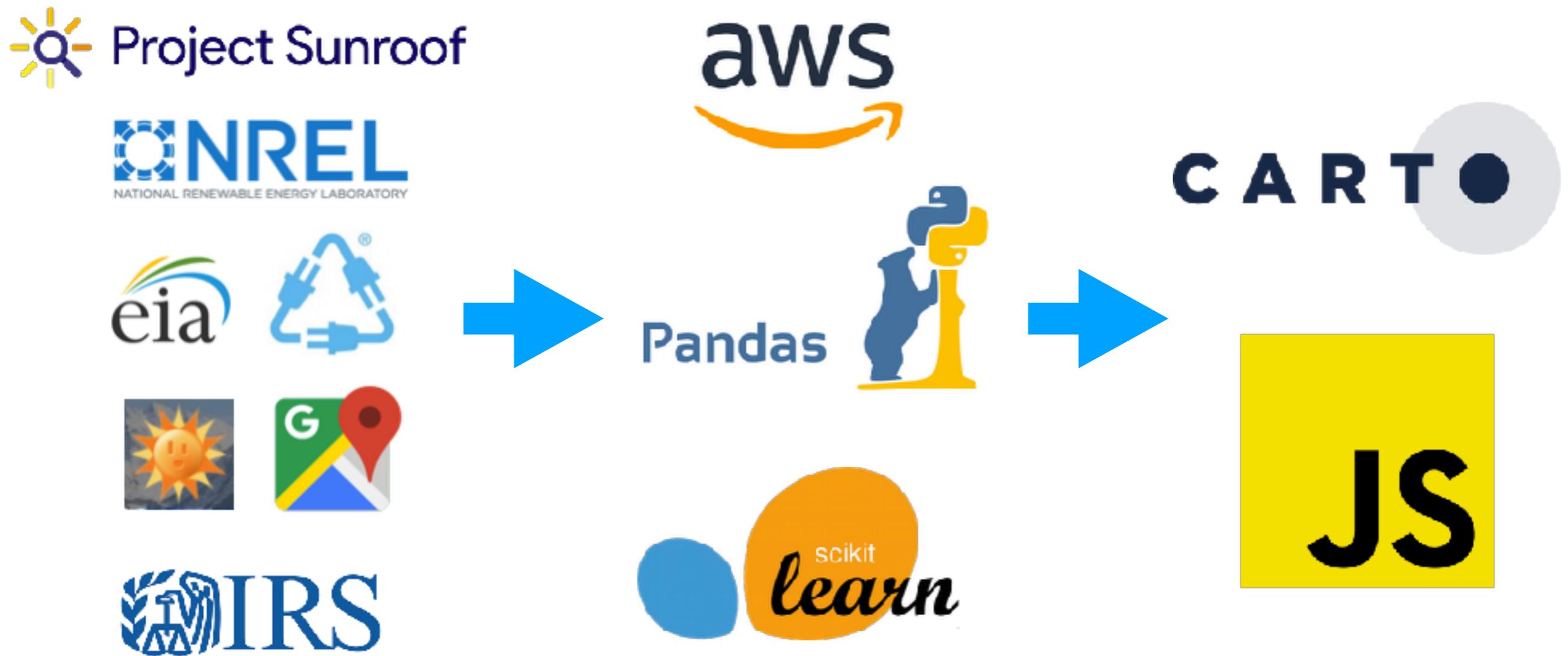
Sun Models
Jacob Levine

Problem

**Predicting the
Median Cost of
Solar Panel
Installations
across the U.S. on
a *Zip Code* Basis.**

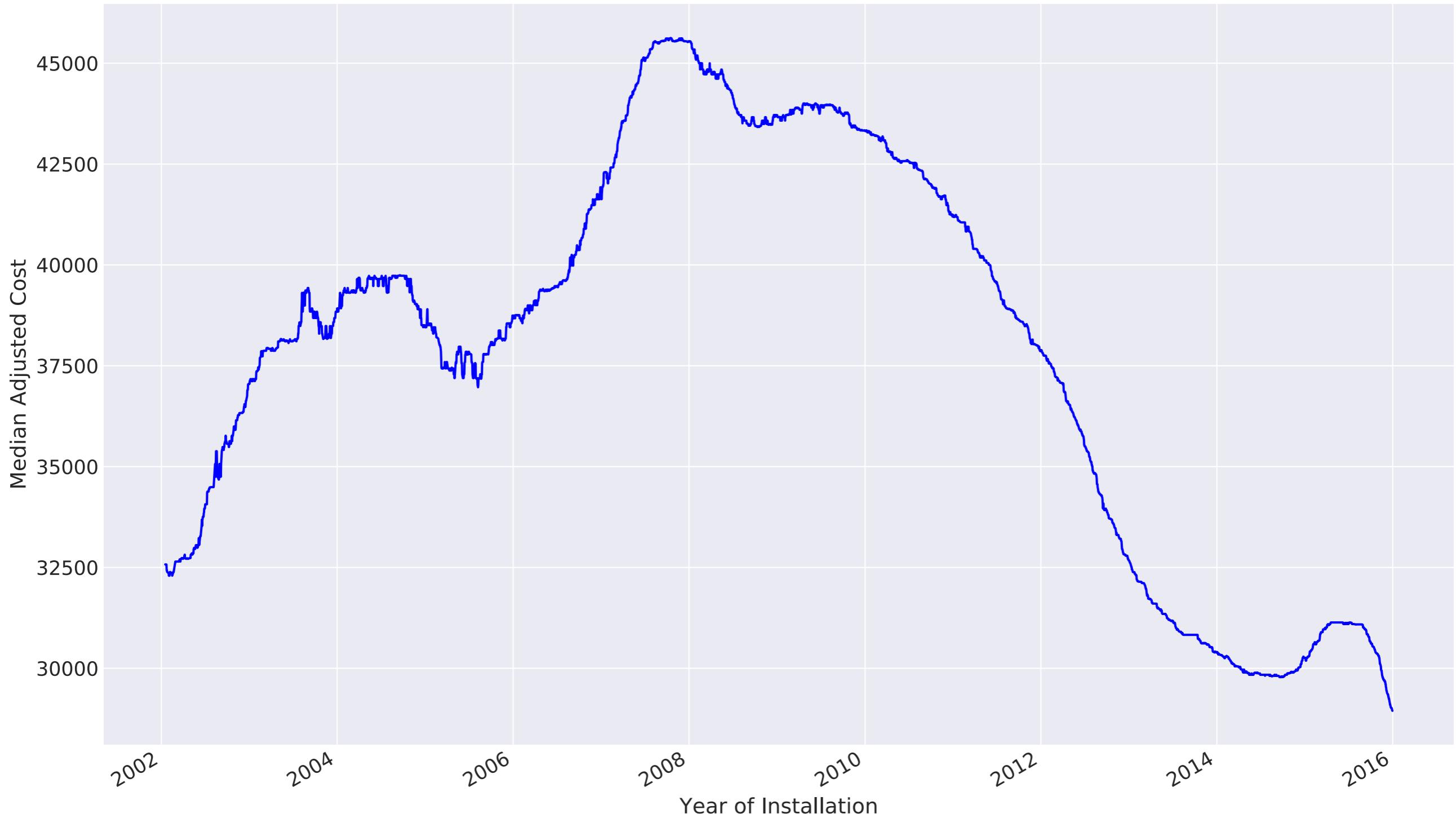


Process



The Solar Trend

Yearly Rolling Median of Solar System Installations 2002 - 2016



Data

Training Set
2002 - 2014

**~18K
Observations**

Median Cost	Year	Zip	...	Prev Year
\$31,492	2010	10512	...	
\$40,244	2011	10512	...	\$31,492
\$39,515	2012	10512	...	\$40,244
\$28,962	2013	10512	...	\$39,515
Y	X Train {11 Features}			

Test Set 2015

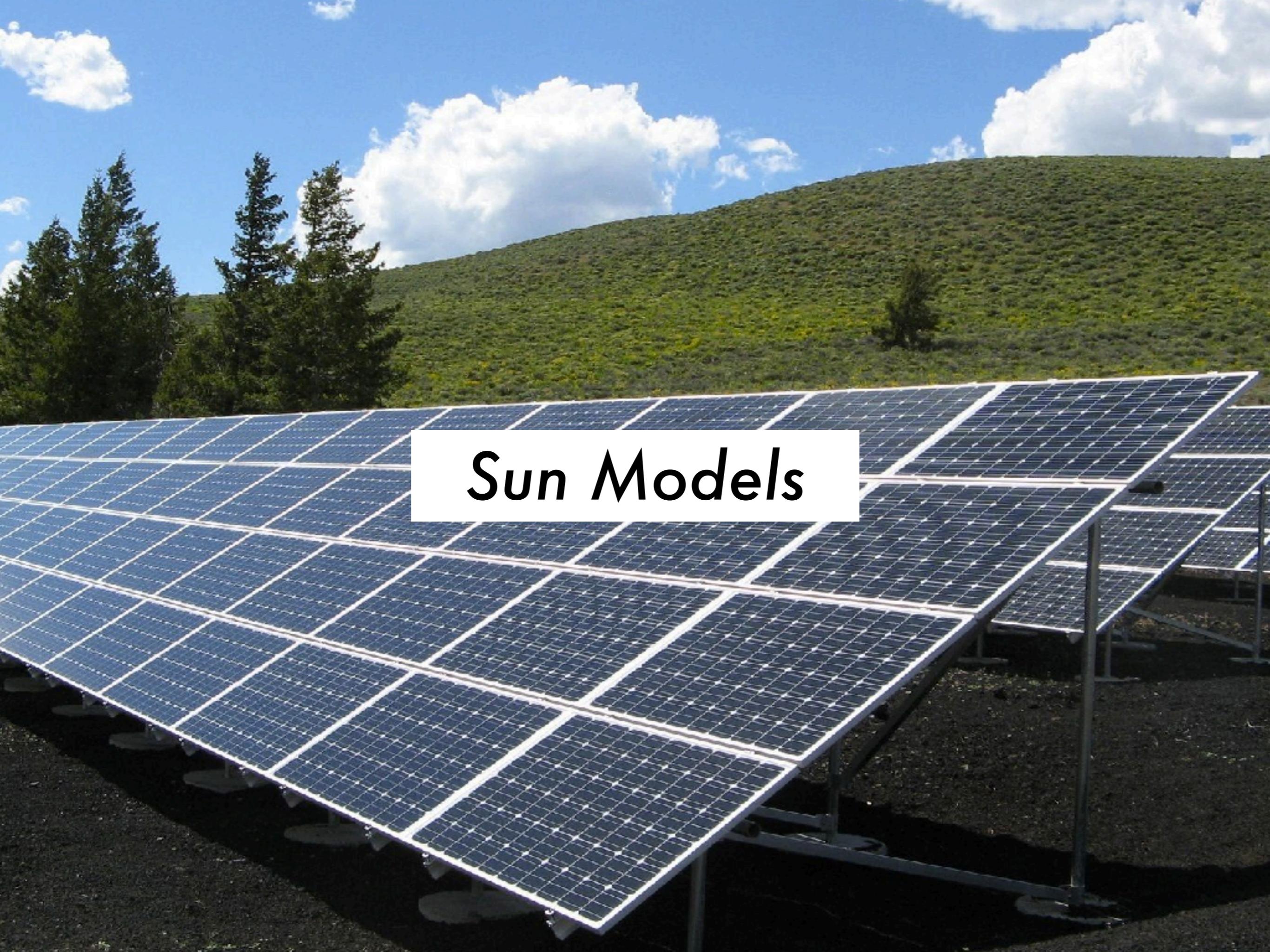
**~4K
Observations**

Median Cost	Year	Zip	...	Prev Year
\$36,300	2015	10512	...	\$28,962
\$47,400	2015	10514	...	\$29,262
\$35,369	2015	10516	...	\$42,201
Y	X Test {11 Features}			

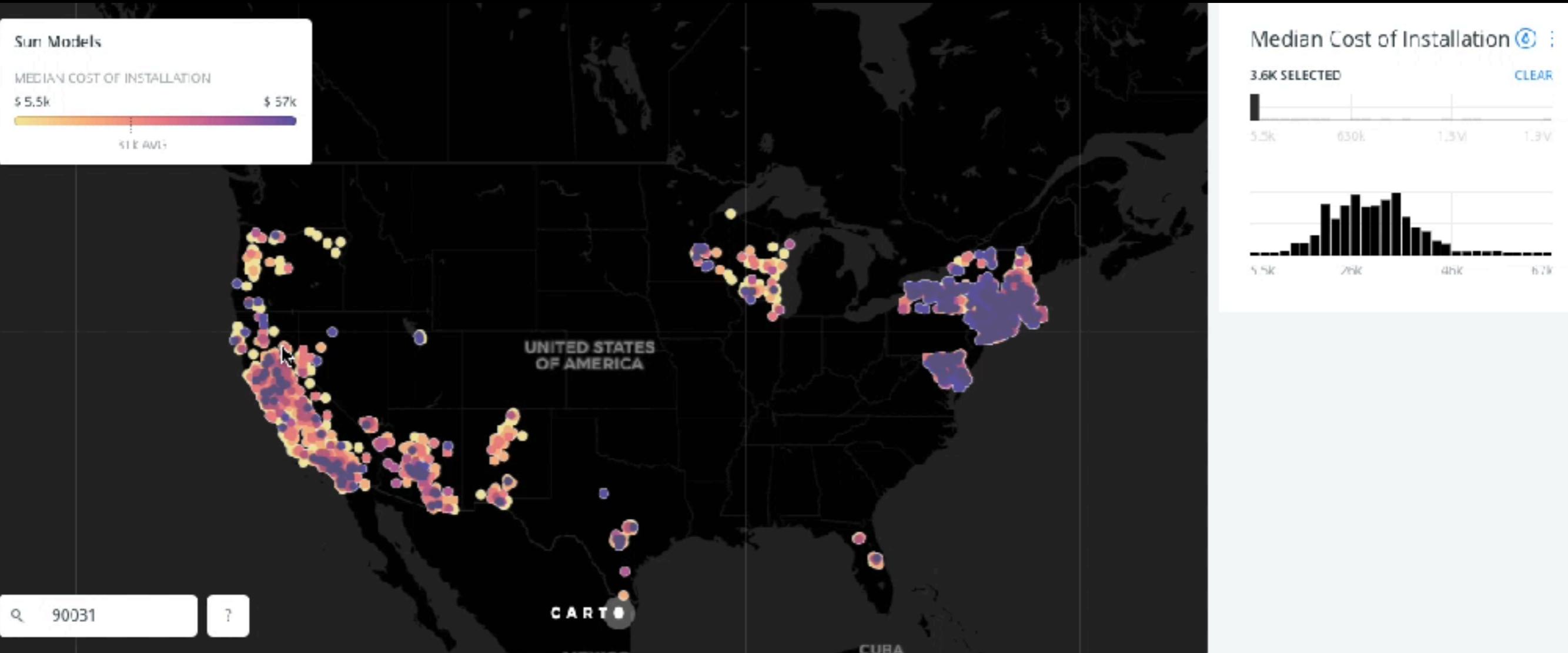
Modeling

	AR Linear Regression ElasticNet	AR Gradient Boosted Regressor 2,000 Trees
Test R ²	0.71	0.83
Test Median Absolute Error	3,233	2,459

Median Cost of Installation per Zip ~ \$30,000

A photograph of a solar farm. In the foreground, several rows of blue solar panels are mounted on metal stands, angled towards the sun. Behind them, a green hillside covered in vegetation rises against a bright blue sky with scattered white clouds. A white rectangular overlay box is positioned in the center of the image, containing the text "Sun Models" in a bold, black, sans-serif font.

Sun Models



A photograph of a sunset over a calm sea. The sky is filled with warm orange and yellow hues, with darker clouds at the top. In the distance, a dark silhouette of land or a city skyline is visible across the water. The horizon line is roughly in the middle of the frame.

Thank you!

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