



The HouseCanary

# Home Price Index



# Introduction

HouseCanary's Home Price Index (HPI) is our proprietary measure of changes in single-family home prices over time. We harness artificial intelligence to recalculate HPI models every month based on our comprehensive national dataset. Rigorous quality control processes ensure that our HPI time series reflect historical home prices and predict future prices with an industry-leading degree of accuracy.





# The benchmark for state-of-the-art analytics

As a record of past prices and a model of future trends, the proprietary HouseCanary HPI is the fundamental benchmark for our valuation and forecasting tools.

Our monthly HPI time series identify local volatility and likely changes to home value based on up-to-date information. The granularity of our HPI models provides a ground-level view of risk and opportunity, making it possible to directly compare submarkets within a Metropolitan Statistical Area (MSA).

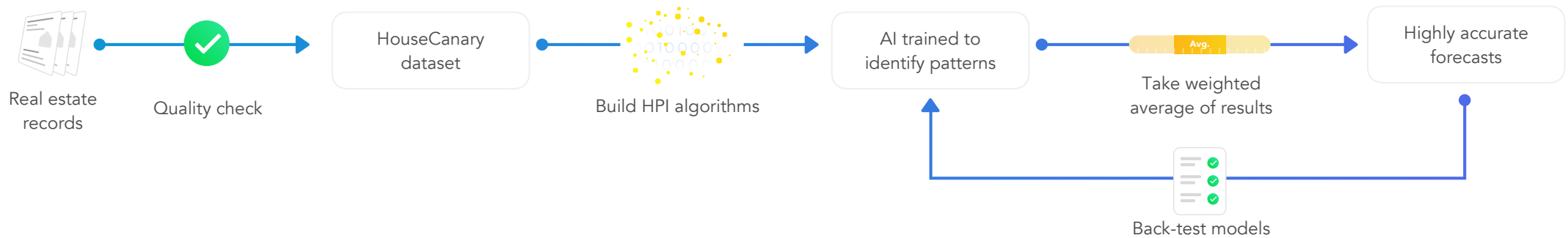


# How do we develop our HPI?

**1** Vast and reliable dataset

**2** Models driven by artificial intelligence

**3** Extensive back-testing for precision





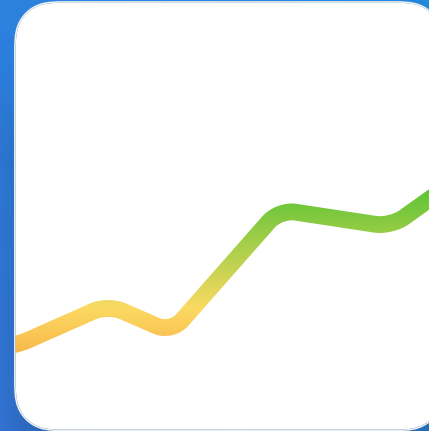


Founded in 2013, HouseCanary is a real estate brokerage and technology company providing the most accurate home valuations to drive smarter decisions across the real estate ecosystem. Clients include leading institutional investors and lenders who trust HouseCanary's products to fuel acquisition, portfolio management, underwriting, and other processes. HouseCanary can be found at [www.housecanary.com](http://www.housecanary.com).

1

## Vast and reliable dataset

We quality-check and normalize data from thousands of data streams across the country, integrating residential real estate data as far as 1975 where records are available. Our automated systems and quality control staff ensure the integrity of our dataset, even as we constantly incorporate new information. The only potential for delay is due to processing time at our data sources.



## Models driven by artificial intelligence

Our engineers and data scientists build algorithmic models to generate local historical price indices from our dataset, and to project future trends based on those indices.

Machine learning models are ideally suited to solving prediction problems with a multitude of data. They readily identify high-level patterns that classical models miss. Artificial intelligence also gets better at problem-solving as it processes additional data, without the need for our engineers to directly program those improvements.





## Extensive back-testing for precision

Our data scientists constantly test the accuracy of our models by comparing last month's model outputs to the latest market data. We internally back-test HPI our models every month by running them on data that they were not built on. Testing results provide us with accuracy metrics for our algorithms and help us refine our HPI algorithms for the upcoming month. Our models also undergo third-party accuracy testing on a quarterly basis.



# Better information to drive wiser decisions

We support valuation and forecasting for markets that once seemed impossible to cover. Using AI-driven statistical methods, we generate HPIs for sparsely-populated ZIP codes. Micro-market trends also have a large impact on risk and return. Our neighborhood-level HPIs reveal this hidden variability across submarkets.

These insights support faster and wiser investment and risk management choices. At HouseCanary, we are changing the way decisions are made in residential real estate.

