BLUE ARK REALTY HOUSE PRICE PREDICTION

Predicting house prices using historical data and provide insights into key factors influencing the real estate market.

BUSINESS INTRODUCTION

Blue Ark Realty is a leading real estate company dedicated to developing vibrant, sustainable communities that help clients find their dream homes. We pride ourselves on delivering personalized experiences, ensuring that homeowners not only invest in a property but also in a space where they can feel at home and live happily. Our commitment to client satisfaction extends beyond just buying and selling houses — we aim to create communities where families can thrive.

In today's fast-paced real estate market, Blue Ark Realty uses data-driven insights to stay ahead. By leveraging advanced analytics and visualization tools like Tableau, we optimize our operations and provide our clients with a seamless experience.

PROBLEM STATEMENT

The real estate market is inherently volatile and influenced by a variety of factors such as location, quality of materials, and market conditions. Traditional methods often fall short in capturing the nuanced patterns that contribute to price fluctuations. The challenge lies in observing theses pattern and predicting future outcomes using historical and current data to provide accurate insights into house prices.

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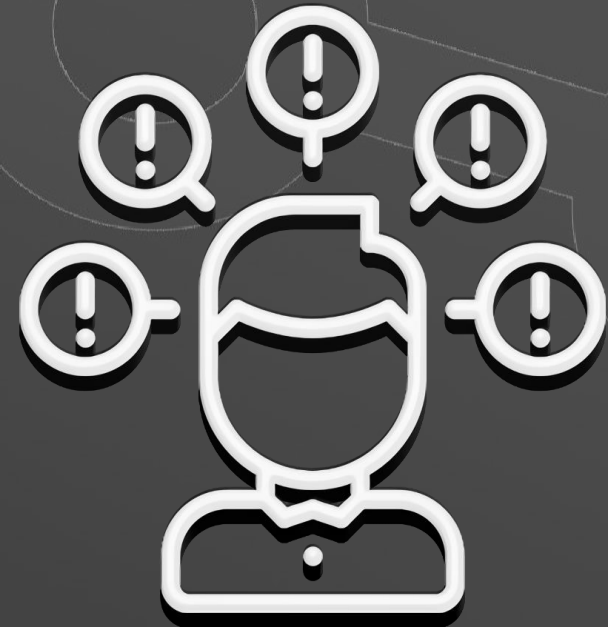
RATIONALE FOR THE PROJECT

Accurately predicting house prices is crucial for making informed decisions in the real estate market. This project is significant because it enables stakeholders to understand the underlying factors affecting house prices, improving their ability to navigate the market confidently. The use of Tableau allows for powerful data visualization, transforming complex data into actionable insights.

AIM OF THE PROJECT

Develop an interactive Tableau dashboard that visualizes key real estate metrics.

Analyze data on real estate sales and observe patterns and trends within the data

Enable users to explore relationships between various factors (e.g., quality, location) and house prices.

Create a forecast using historical data to estimate future house prices.

Enhance decision-making capabilities for real estate professionals by providing actionable insights from analysis

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DATA DESCRIPTION

The dataset includes a variety of variables essential for understanding house prices, such as SalePrice, Neighborhood, YearBuilt, Overall Quality, and more. Each variable provides insights into different aspects of the housing market, allowing for a comprehensive analysis.

Key Variables:

SalePrice: The property's sale price in dollars.

Neighborhood: Location within Ames city limits.

OverallQual: Overall structure and finish quality.

YearBuilt: Year the house was built.

DATA DICTIONARY

- **Id**: Unique Identifier
- **SalePrice**: the property's sale price in dollars.
- **MSSubClass**: The building class
- **Street**: Type of road access
- **Utilities**: Type of utilities available
- **LotConfig**: Lot configuration
- **Neighborhood**: Physical locations within Ames city limits
- **HouseStyle**: Style of dwelling
- **OverallQual**: Overall material and finish quality
- **OverallCond**: Overall condition rating
- **YearBuilt**: Original construction date
- **YearRemodAdd**: Remodel date
- **RoofStyle**: Type of roof
- **Bedroom**: Number of bedrooms above basement level
- **Kitchen**: Number of kitchens

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DATA DICTIONARY

- **KitchenQual**: Kitchen quality
- **TotRmsAbvGrd**: Total rooms above grade *(does not include bathrooms)*
- **Functional**: Home functionality rating
- **Fireplaces**: Number of fireplaces
- **FireplaceQu**: Fireplace quality
- **GarageType**: Garage location
- **GarageYrBlt**: Year garage was built
- **GarageFinish**: Interior finish of the garage
- **GarageCars**: Size of garage in car capacity
- **GarageArea**: Size of garage in square feet
- **MoSold**: Month Sold
- **YrSold**: Year Sold
- **SaleType**: Type of sale
- **SaleCondition**: Condition of sale

DATA DICTIONARY

The values in the Sale Type column represent different types of sales in the housing market. Here's what each typically stands for:

1. **COD:** Cash on Delivery – This refers to a sale where the payment for the property was made in cash at the time of sale.

2. **Con:** Contract – A standard real estate sale based on a traditional contract, often with a mortgage.

3. **ConLD:** Contract with Loan Due – A sale where the contract is in place but a loan is due or involved, possibly with some special conditions related to the loan.

4. **ConLI:** Contract with Low Interest – A sale where the buyer benefits from a contract with a low-interest rate on the mortgage.

5. **ConLw:** Contract with Low Down Payment – This refers to a sale contract that was completed with a low down payment, making the purchase more accessible to buyers with limited upfront cash.

6. **CWD:** Court-Ordered Sale – A sale that is ordered by the court, often as a result of legal proceedings like foreclosure, divorce settlements, or probate.

7. **New:** New Construction – Refers to the sale of a newly built home, usually sold by the builder or developer.

8. **Oth:** Other – Any other type of sale that doesn't fit into the standard categories, often used for unique or less common transactions.

9. **WD:** Warranty Deed – A typical type of real estate sale where the seller guarantees they hold clear title to the property and have the right to sell it. It's a common method of transferring ownership with warranties or assurances about the title.
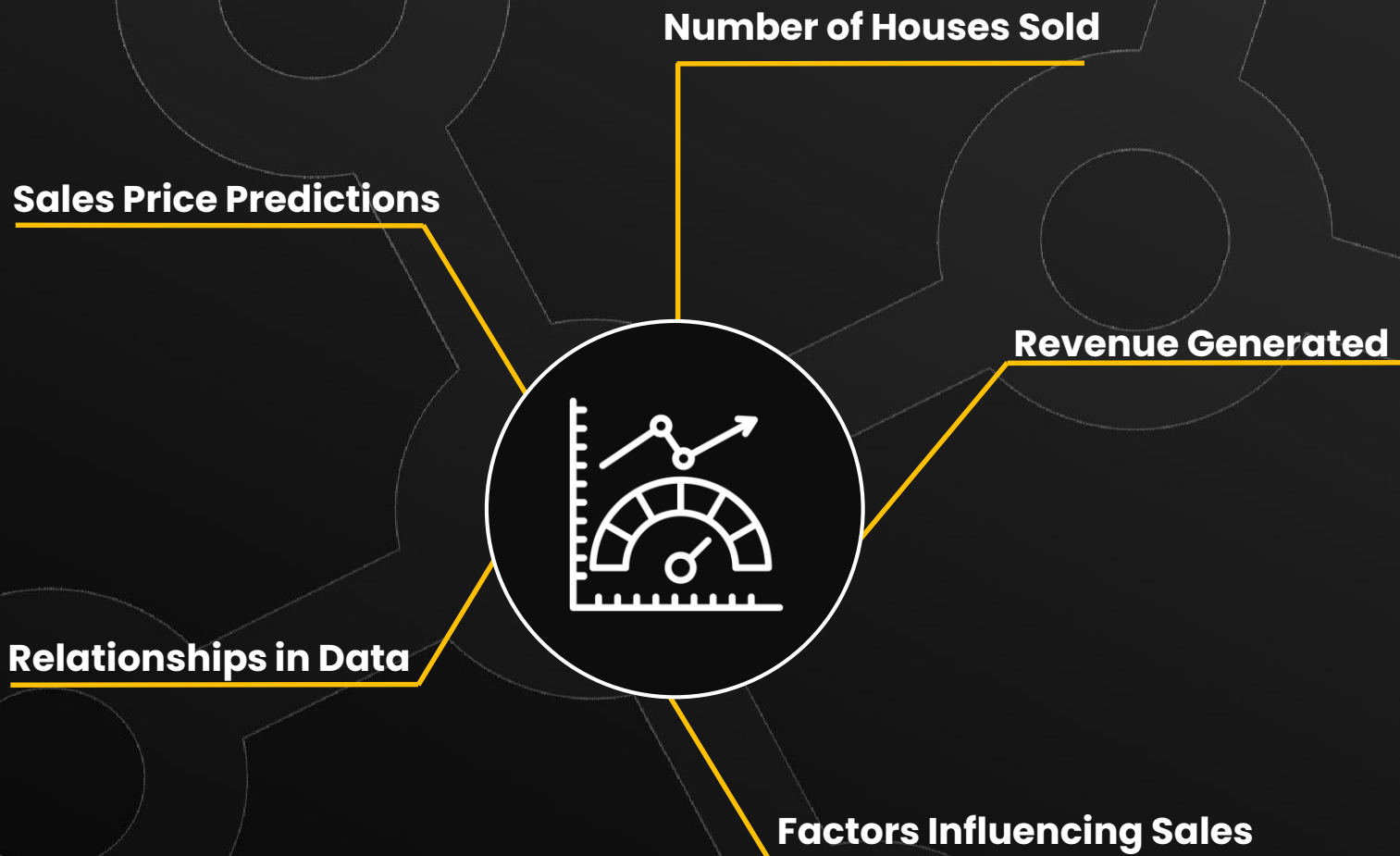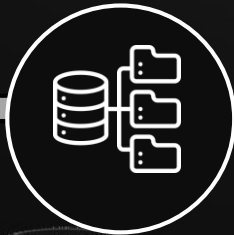
TECH STACK

Data Structuring

Calculated Fields

Visualizations

Filters and Parameters

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