

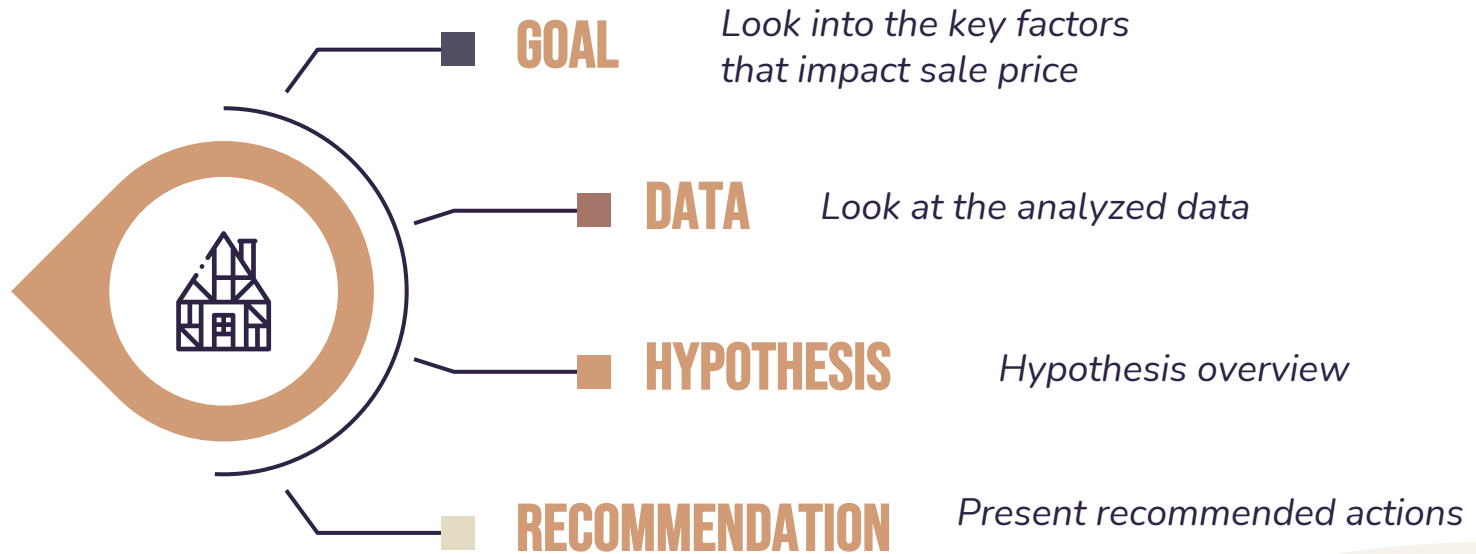
# HOUSE PRICE

## DESCRIPTIVE AND INFERENTIAL STATISTICS

*Presented by Rumi Nakazoe*



# OBJECTIVES



# DATA ANALYZED

## 01 LOCATION

*Ames, Iowa*

## 02 YEAR BUILD/SOLD

*Year build: 1872 - 2010*

*Year Sold: 2006 - 2010*

## 03 # OF HOUSE SOLD

*1460 Sales*

## 04 SALE PRICE PER SQ FT

*AVG: \$120.57*

## 05 DISTRIBUTION

*All variables used have  
normal distribution  
(Applicable for t-test)*

# HYPOTHESES OVERVIEW



## REMODEL



*House built after 1990  
vs  
House remodeled after  
1990*

## STYLE



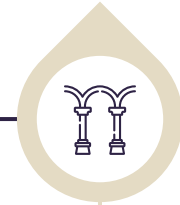
*1 Story  
vs  
2 Story*

## BEDROOMS



*0-2 bedrooms  
vs  
3+ bedrooms*

## HOUSE TYPE



*Single family house  
vs  
Town house*

# REMODELED VS NOT REMODELED

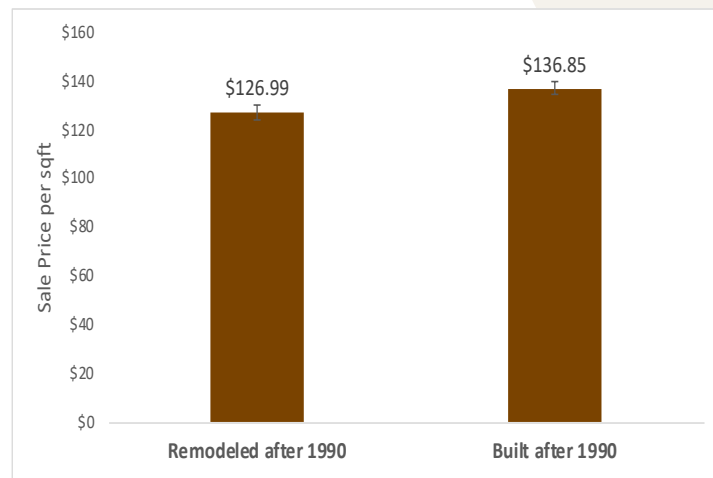
*Ho: Remodeling house does not affect sale price*

*Ha: Remodeling house affects sale price*

*Statistically significant difference between house built after 1990 and house remodeled after 1990.*

***(Therefore, reject null hypothesis)***

- *With 95% confidence, the avg sale price per sq ft for house built after 1990 is between \$6 and \$14 higher compared to house remodeled after 1990.*
- *Non-remodeled house sell \$8.6K to \$21K higher than remodeled house for 1500 sq ft houses*



\*House built after 1990: Includes only the houses that have never been remodeled and were built after 1990

# 1 STORY VS 2 STORY

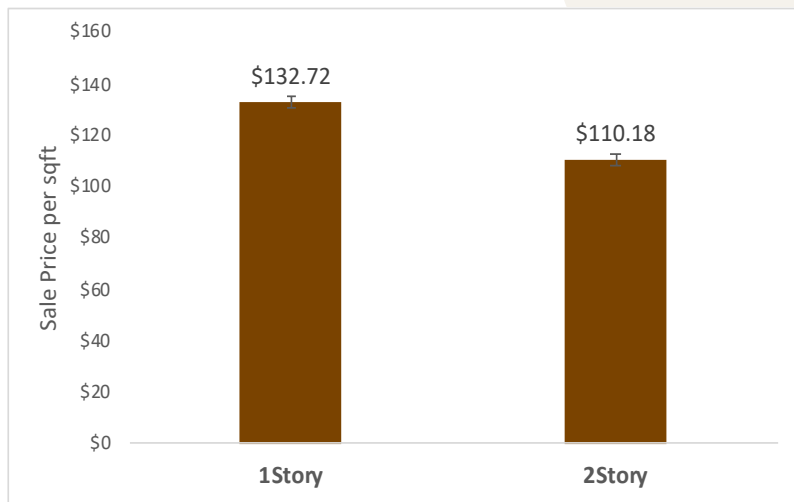
*Ho: Number of stories does not affect sale price*

*Ha: Number of stories affects sale price*

*Statistically significant difference between 1 story house and 2 story house.*

***(Therefore, reject null hypothesis)***

- *With 95% confidence, the avg sale price per sq ft for 1 story house is between \$19 and \$25.7 higher compared to 2 story house.*
- *1 story house sell \$29K to \$38.5K higher than 2 story for 1500 sq ft house size*



# 0-2 BEDROOMS VS 3+ BEDROOMS

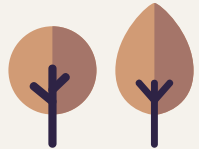
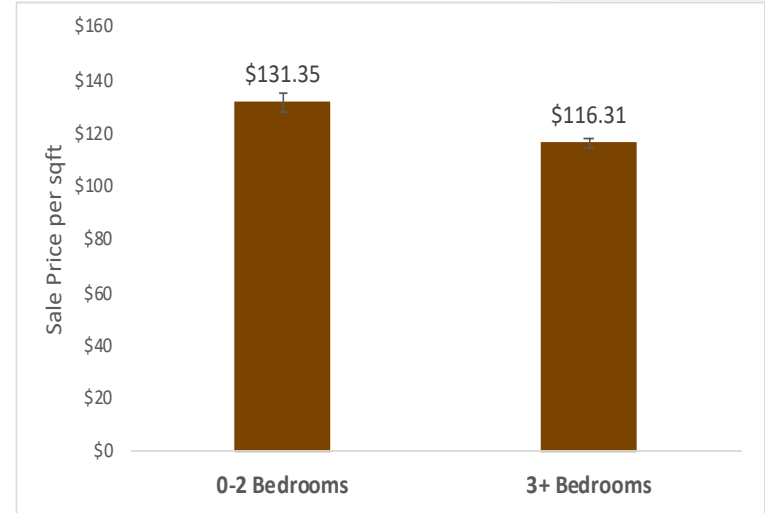
*Ho: # of bedrooms does not affect sale price*

*Ha: # of bedrooms affects sale price*

*Statistically significant difference between house with 0-2 bedrooms and house with 3+ bedrooms.*

***(Therefore, reject null hypothesis)***

- *With 95% confidence, the avg sale price per sq ft for house with 0-2 bedrooms is between \$11 and \$18.8 higher compared to house with 3+ bedrooms.*
- *House with 0-2 bedrooms sell \$16.5K to \$28K higher than house with more than 3 bedrooms for 1500 sq ft house size*



# SINGLE FAMILY VS TOWN HOUSE

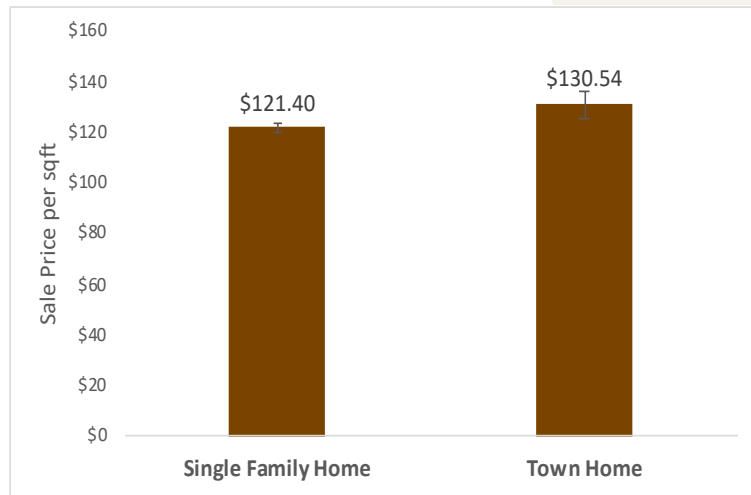
*Ho: Home type does not affect sale price*

*Ha: Home type affects sale price*

*Statistically significant difference between single family house and town house.*

***(Therefore, reject null hypothesis)***

- *With 95% confidence, the avg sale price per sq ft for town home is between \$3.7 and \$14.5 higher compared to single family house.*
- *Town house sell \$5.5K to \$22K higher than single family house for 1500 sq ft house size*





# RECOMMENDATION

## 01: AGE

*Built after 1990*

## 02: HOUSE STYLE

*1 Story*

## 03: BEDROOMS

*0-2 bedrooms*

## 04: HOME TYPE

*Town house*



# MORE ANALYSIS CAN BE DONE



## EXTRA FEATURES

- *Garages*
- *Porch*
- *Material*



## LOCATION

- *Neighborhood*
- *Surrounding schools, hospitals, etc.*



# THANK YOU!

*Do you have any questions?*

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