

WEEK 5: - ARTIFICIAL INTELLIGENCE AS A DECISION-MAKING TOOL  
- *BUSINESS DECISION MAKING (Continued)*



**MIS** Management  
Information  
System

LECTURER: Sam Yuan Permadi, M.Sc

# COMMON DSS ANALYSIS TECHNIQUES

## WHAT IF ANALYSIS

To find a way to understand how changes in one thing affect another.



## SENSITIVITY ANALYSIS

To find the impact of many variables when one variable is changed repeatedly.

## GOAL SEEKING ANALYSIS

To find a certain initial value for an expected final value.



## OPTIMIZATION ANALYSIS

Basically, Goal-Seeking analysis but enhanced by sets of variable test and in specific conditions. The Purpose is to get the Optimum value

## WHAT IF

### ANALYSIS

To find a way to understand how changes in one thing affect another.

sale price	loaves sold	revenue
\$2	100	\$200
\$3	74	\$222
\$4	55	\$220

# COMMON DSS ANALYSIS TECHNIQUES

WHAT IF  
ANALYSIS



## SENSITIVITY ANALYSIS

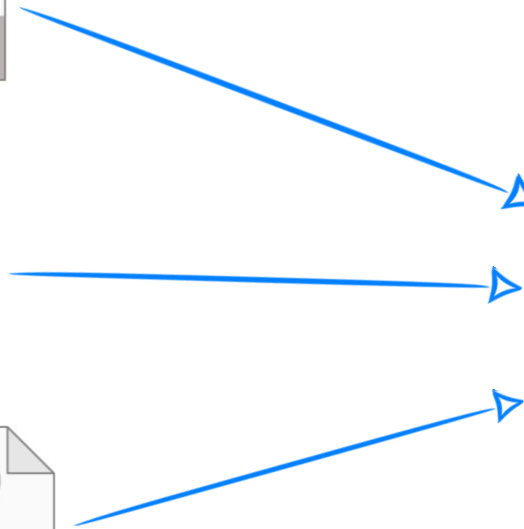
To find the impact of many variables when one variable is changed repeatedly.

Plain Bread price	Bread Type	loaves sold	revenue
\$3	Fire floss	100	\$200
	Soft Rolls	74	\$222
	French Bread	55	\$220

Sensitivity analysis is the tool that calculates the impact of one independent variable to the others. In management accounting, we use it to calculate the change of company net profit if other factors change. These factors includes selling price, selling quantity, cost of raw material, etc.

## GOAL SEEKING ANALYSIS

To find a certain initial value for an expected final value.



- The process of identifying the right input value when we only know the outcome/goal/output (Kenton, 2021)
- Finding what components or factors are required in order to accomplish specific goals (Computer Business Research, n.d.).

# COMMON DSS ANALYSIS TECHNIQUES

**GOAL SEEKING**  
ANALYSIS



**OPTIMIZATION**  
ANALYSIS

Basically, Goal-Seeking analysis but enhanced by sets of variable tests.

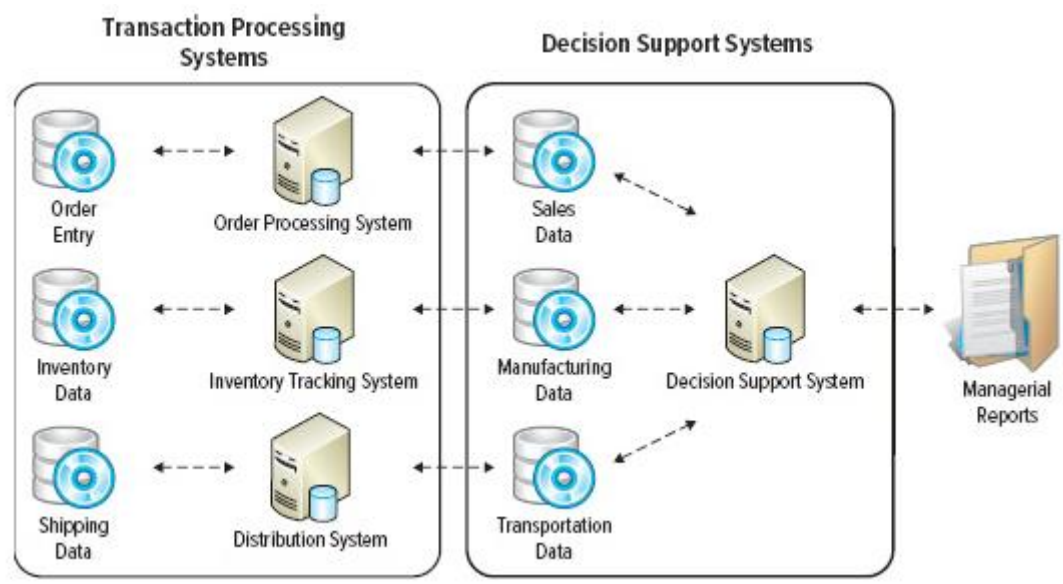
Experimented in specific conditions.

The Purpose is to get the Optimum value

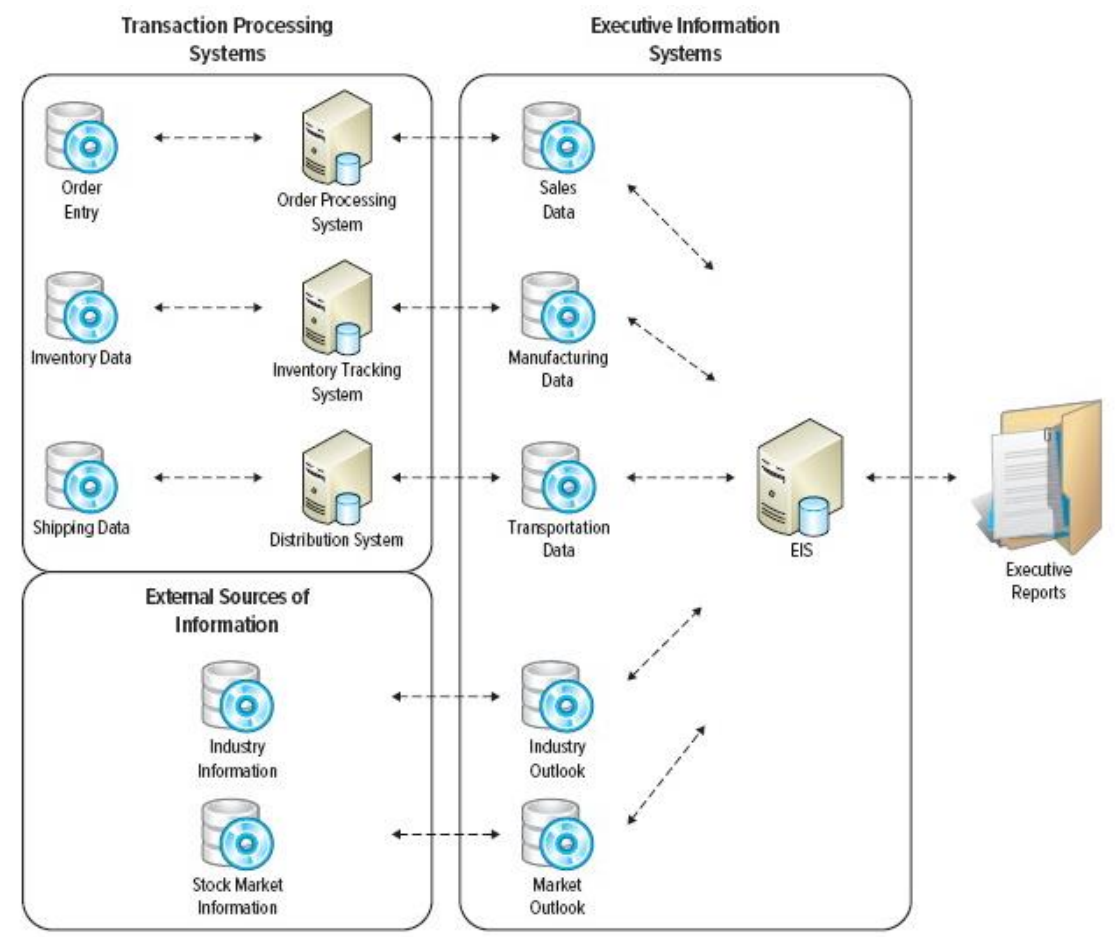


# COMMON DSS ANALYSIS TECHNIQUES

## TPS and DSS interaction



## TPS and EIS interaction



# INFORMATION LEVEL THROUGHOUT ORGANIZATION



Coarse



Analytical



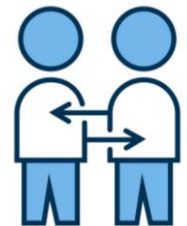
Granularity

Fine

Processing Software

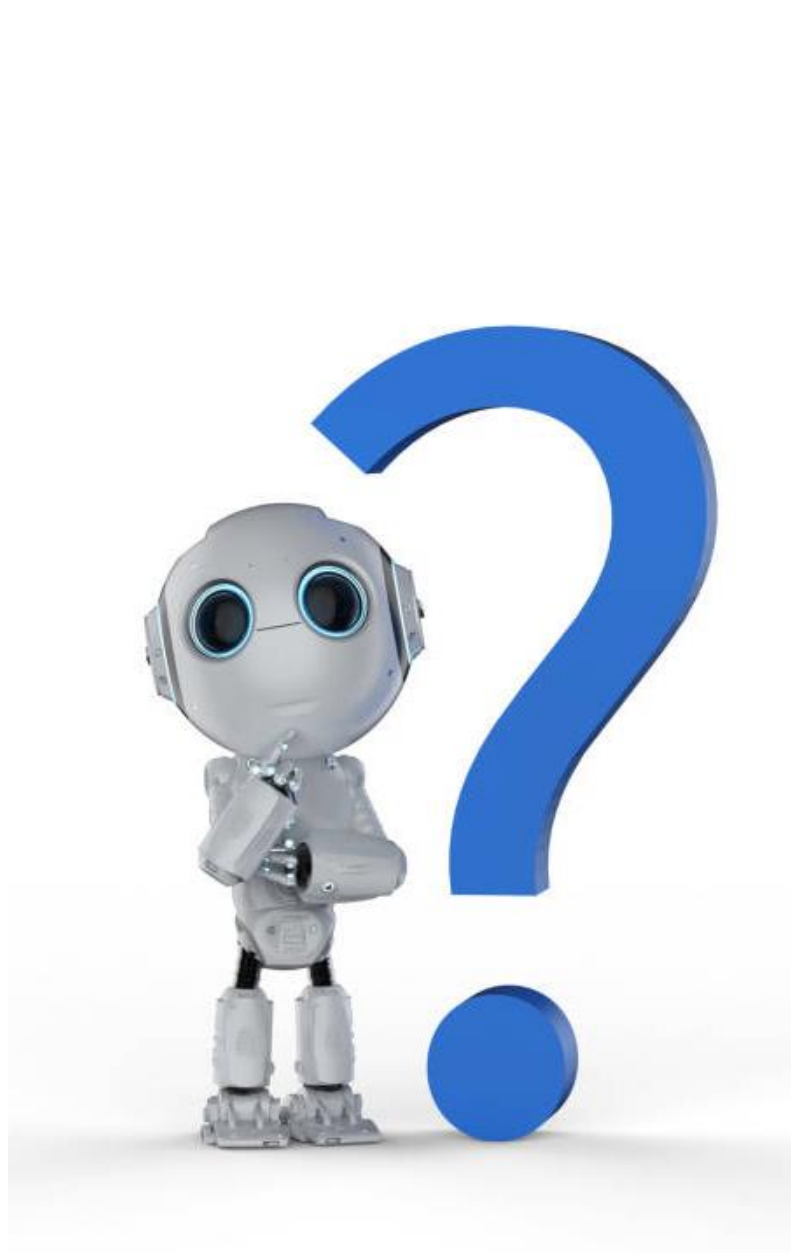


Transactional





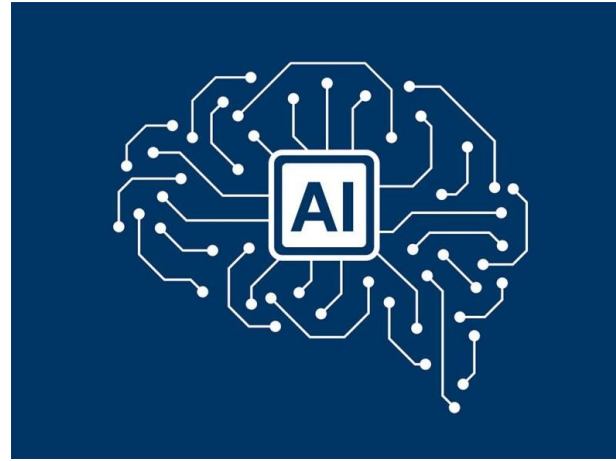
# **AI ARTIFICIAL INTELLIGENCE**



# LET'S TALK ABOUT AI

*What are 3 words that come up to your mind if you think about AI ?*

*Elaborate with it with your own idea!*



**AI is a software which simulates the human's ways of thinking such as the behavior, thought process and judgement. The processing of AI includes the ability to reason and learning from new things or mistakes. This concept is also applied within a company or organization**

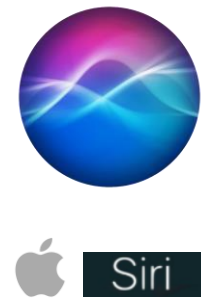
(Baltzan, 2020; GeeksforGeeks, 2021)

These are AI applications under the its branch called:  
*Natural Language Processing & Voice Recognition*

“Hey Cortana”



“Hey Siri”



“Ok Google”



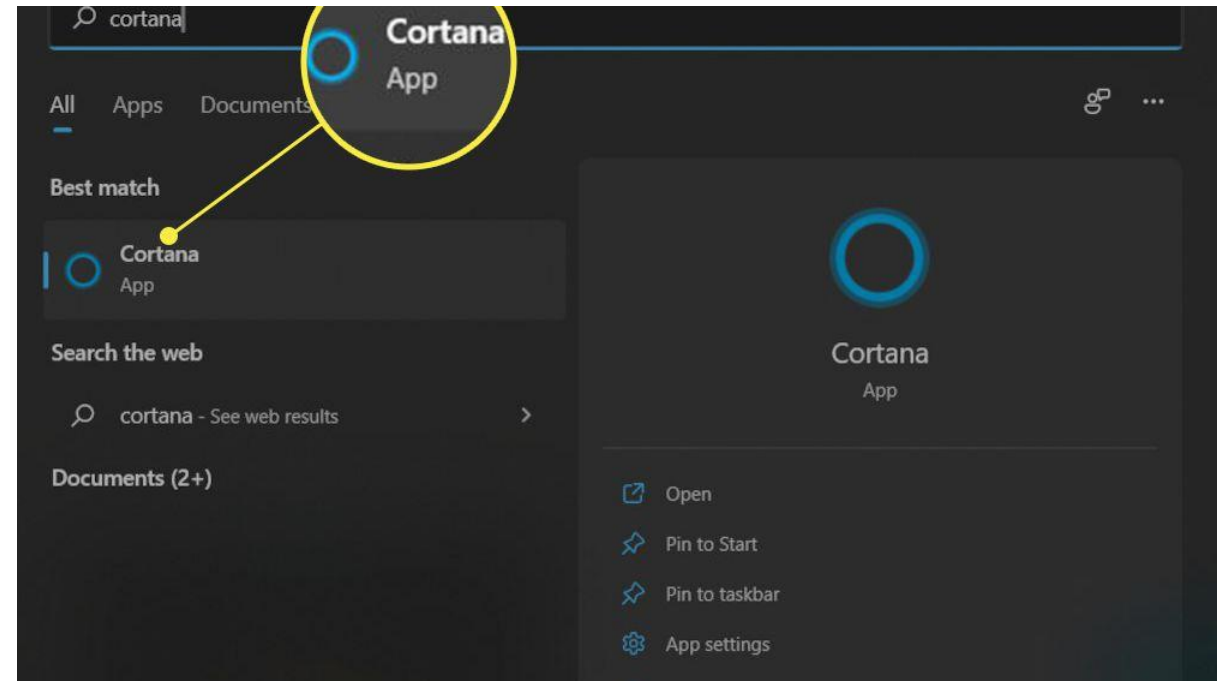
“Alexa”



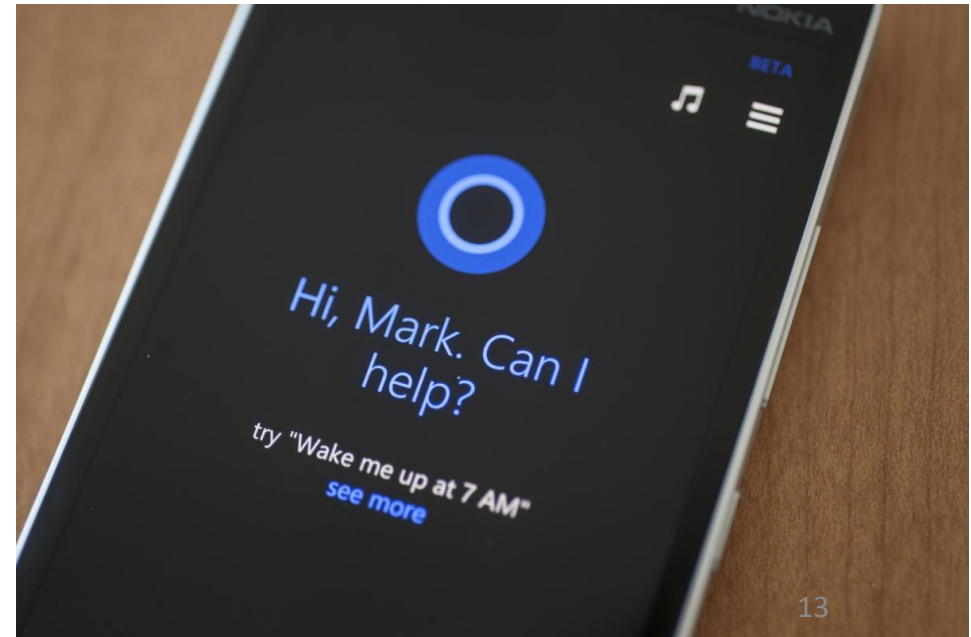
# AI TO MAKE BUSINESS DECISION



Cortana on Windows PC



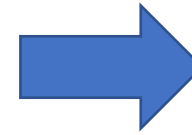
Cortana on Windows phone



Cortana's Iconic Line



# AI TO MAKE BUSINESS DECISION



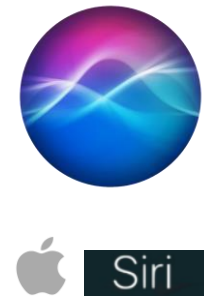
Cortana on  
"Halo" video game

These are AI applications under the its branch called:  
*Natural Language Processing & Voice Recognition*

“Hey Cortana”



“Hey Siri”



“Ok Google”




“Alexa”



***Then, how is it applied to modern business?***

# Let's Install your first Personal Assistant!!



- Setting Gear Logo 
- Search box : Assistant Setting
- Hey Google
- Voice Match

## ***ASK SOME (FUNNY) QUESTIONS!***

*“Are you human?”*

*“Are you boy/girl?”*

*“Can you help me name my pet?”*

*“Do you love yourself?”*

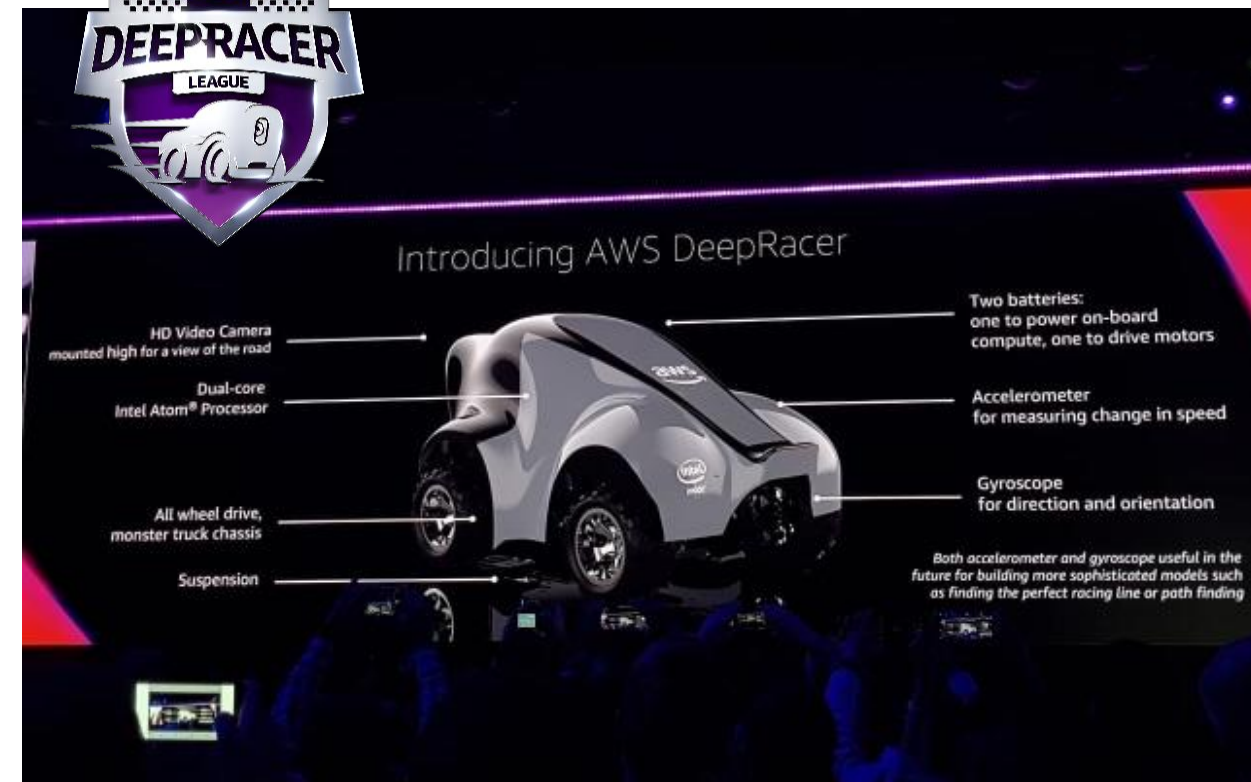
*“What is your favorite movie?”*

*“Do you have boyfriend/girlfriend?”*

*“Can you speak Bahasa Indonesia”*

*Other questions..*

# AUTOMATION AS OTHER EXAMPLE APPLICATION OF AI



<https://kumparan.com/kumparantech/amazon-bikin-mainan-mobil-remote-control-dengan-ai-dan-bisa-diprogram-1543548710699722752/full>

# AI AS A DECISION MAKER

How AI works and can or can't help you to decide



[https://www.ted.com/talks/janelle\\_shane\\_the\\_danger\\_of\\_ai\\_is\\_weirder\\_than\\_you\\_think](https://www.ted.com/talks/janelle_shane_the_danger_of_ai_is_weirder_than_you_think)

# IS AI *(REALLY)* DANGEROUS FOR BUSINESS AND HUMANITY?

AI as Decision Maker in Military: *Autonomous War Robot*



# Is AI beneficial or detrimental ?



**STEPHEN HAWKING**

***“Superhuman artificial intelligence could provide incalculable benefits, but could also end the human race if deployed incautiously”***  
(Achyuth, 2020).

# **AI in Improving Business/Organization**

## **Improved Efficiency and Better Precision at Lower Costs**

AI is considered an inseparable component to business who are offering products and services because it is able to bring consumers to the business through focused advertisements and search histories. AI gathers vital information and able to increase traffic to the website or store (Jones, 2018).

**Stay Home. Stay Safe.**

**Follow the Golden Rule.**

**Wash your hands frequently with soap and water or use alcohol-based hand-rub.**



**COMBAT  
CORONA  
VIRUS  
(COVID-19)**

**End of Presentation**

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[M.&text=Goal%2Dseeking%20analysis%20determines%20the,earn%20%242%20million%20in%20profit](https://www.computerbusinessresearch.com/Home/decision-making/goal-seeking-analysis/#:~:text=Goal%20seeking%20analysis%20searches%20what,the%20plant%20manager%20for%20GM.&text=Goal%2Dseeking%20analysis%20determines%20the,earn%20%242%20million%20in%20profit)

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