

FUNDAMENTAL BUSINESS DATA VISUALIZATION NOTES

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Based on course material provided through King Mongkut's
University of Technology Thonburi (KMUTT)

All Learning Unit Documents

Course Introduction

Human interprets picture better than words

↳ like plotting chart to look pattern

- Start by asking question
- Understand data collection
 - transform data to proper data
 - data cleaning
- 3 Libraries

With data visualization → for users
→ for team

Introduction to Data Science for Business

Stages of Data Science

1. Data Acquisition & Understanding

- involves collecting raw data from various sources like databases, API, web scraping

3- Deployment

- Used to make prediction and decision in REAL TIME

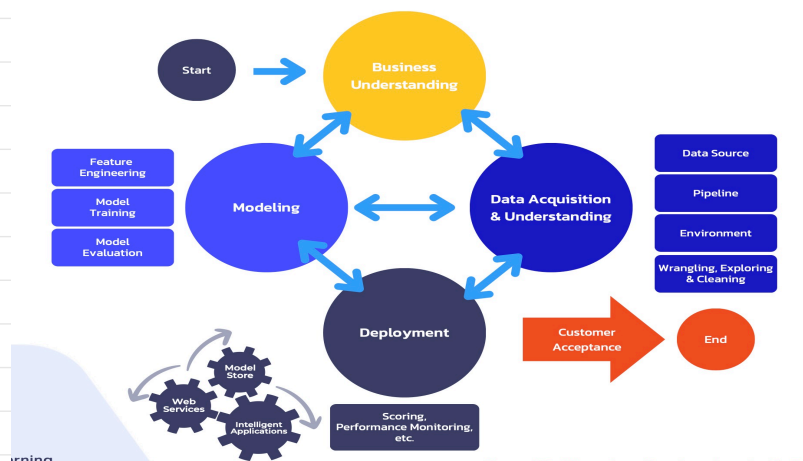
Data Modeling

- 2.
- analyse and process data to create model that can identify pattern & prediction
 - involves STATISTICAL ANALYSIS

4. Customer Acceptance

- presented to stakeholders / end user for feedback

Stages of Data Science



Before data analysis, we need to understand Business

① What problem are we solving?

- ask the right questions
- find the right data

Business Understanding



Define Objectives

- Identify the business problem.
- Ask questions that define business goals achievable with data science.

Examples:

- How much will sales increase? (Regression)
- Which customer will churn? (Classification)
- Which products are similar? (Clustering)
- Is this transaction suspicious? (Anomaly Detection)
- What's the best product recommendation? (Recommendation)

Identify Data Sources

- Identify relevant data to answer your questions.
- Ensure data accurately reflects both the target outcome and related features.

Data Acquisition and Understanding

- prepare data before analyzing

Ingest the data

- get the data into the system

Explore the data

- check quality of data, ensure clean (data cleaning)

Set up the data pipeline

Modeling

Feature engineering

- process in which we transform raw data into features so that the model can understand

Model training

- test model and pick that solves problem accurately

Determine if your model is suitable for production

- test in real time

Deployment

Operationalize the model

- transfer model to the special environment

Expose model with an API interface

- API allows applications to easily talk to the model and get predictions

Customer Acceptance

System Validation

Project handoff