# Unit 5B: Business Analytics and Statistics

Prerequisites: Datastores, Databases, and Processing CSV Data

## Learning Objectives

This unit is provided as optional bonus material for students interested in statistics, natural language processing, and machine learning.

### Discussions and Notes

- Business Analytics
- Statistics and Statistical Models
- Natural Language Processing (NLP) and Sentiment Analysis
- Artificial Intelligence and Machine Learning (AI/ML)

### Reference Documents

- Natural Language Processing:
  - The nltk Package
  - The spacy Package
- Statistical Models, Machine Learning, and Neural Networks:
  - The statistics Module
  - The scikitlearn Package
  - The keras Package
  - The tensorflow Package

#### **Activities and Exercises**

- Sentiment Analysis Exercise
- "Monthly Sales Predictions" Exercise