National Taipei University of Technology

Introduction to Data Science

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Heart Disease Analysis

Name: Li-Wei Yeh

StudentID: 108012047

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# Introduction

## 1.1 Motivation

I wanted to use my programming knowledge to help other people. I can do this by analyzing data of a heart disease dataset and predict when a person may or may not have heart disease. Heart disease will thus, be identified easier, depending on the accuracy of my project.

## 1.2 Objectives

The goal of this project is to analyze the dataset. I will be using the heart disease dataset (.csv) and by using the data of the dataset, predict if other people will have heart disease or not.

# Project Plan and Deadlines

## 2.1 Related Work and Resources

I will be using my old project, which is a project using the Decision Tree Algorithm, to predict Spotify data. Further references and resources will be projects of other people, library documentation, etc.

## 2.2 Methodology and Tools

I will be working in sprints of 1 week, every week finishing certain tasks.

The tools I will be using:

* Python, as the programming language
* Anaconda, to handle environments
* Jupyter Notebook, to write code and see the results
* pandas library, to read (and transform) datasets
* numpy library, for containing data in easy to use multi-dimensional arrays
* matplotlib library, to plot the data
* sklearn library, for predictive analysis
* graphviz library. for graphing visualization of the tree

## 2.3 Expected Results

People will be more likely to have heart disease if the chest pain type is high, sex is male and thal is high.

## 2.4 Timeline

Plotting in the first week, predicting in the second week.