

# CLASSIFICATION OF DRUG DATA PLANNING USING K-NEAREST NEIGHBORS ALGORITHM

**Lisa Dwi Novitasari**

Informatics Department  
Faculty of Science and Informatics  
Universitas Jenderal Achmad Yani  
Cimahi, Indonesia  
[lisadwins18@if.unjani.ac.id](mailto:lisadwins18@if.unjani.ac.id)

**Wina Witanti**

Informatics Department  
Faculty of Science and Informatics  
Universitas Jenderal Achmad Yani  
Cimahi, Indonesia  
[wwitanti@gmail.com](mailto:wwitanti@gmail.com)

**Melina**

Informatics Department  
Faculty of Science and Informatics  
Universitas Jenderal Achmad Yani  
Cimahi, Indonesia  
[Melina.akun@gmail.com](mailto:Melina.akun@gmail.com)

**Asep Id Hadiana**

Informatics Department  
Faculty of Science and Informatics  
Universitas Jenderal Achmad Yani  
Cimahi, Indonesia  
[asep.hadiana@lecture.unjani.ac.id](mailto:asep.hadiana@lecture.unjani.ac.id)

## Abstract

Puskesmas is one of the government agencies that handles community services. Puskesmas activities in providing public health services certainly store a lot of data. In general, the Puskesmas records data to make reports. One of them is the drug management report. Generally, the drug management system at the puskesmas is an activity that involves aspects of planning, requesting, receiving, storing, distributing, using, recording and reporting by utilizing available sources. This research focuses on the planning aspect. Drug planning activities are useful for ensuring drug availability. The drug planning stage is very important. Inaccurate drug planning can lead to drug accumulation, drug vacancies, and drug damage which can lead to less than optimal health services at the Puskesmas. The planning stage will also affect the following stages. The case study of this research is the Cicangkanggirang Health Center. This research is related to data mining. One of the algorithms/methods/techniques of extracting or searching for information in data mining is data classification. One method that can be used in data classification is using the K-Nearest Neighbors method. The purpose of this study is to analyze the classification of drug data regarding planning aspects at the Cicangkanggirang Health Center by using the K-Nearest Neighbors method, in order to facilitate drug managers in preparing a Needs Plan. Drugs (RKO) at the time of submitting a drug requirement. This study uses the K-Nearest Neighbors method by applying several research stages, namely, data collection, Knowledge Discovery in Databases (KDD) process, classification techniques (K-Cross validation, Euclidean Distance, results and accuracy), and software development.

## Keywords

Data Mining, Classification, K-Nearest Neighbor, Drug Planning.

## Biographies

**Lisa Dwi Novitasari** is a final year undergraduate student in the department of informatics, University Jenderal Achmad Yani, Cimahi, Indonesia. Her primary interests are Data Mining, Systems Analysis, and Software Engineering.

**Wina Witanti** is an Associate Lecturer. He holds a master's in informatics. Among the researchers' interests are Information Technology Governance Audit At Xyz Service Using Framework Information Technology Infrastructure Library To Support E-Government, Analysis and Design of Priority Determination System for Damage Handling of XYZ Company's Drinking Water Pipes with TOPSIS Method.

**Melina** is an Associate Lecturer. He holds a Masters in Informatics. Among the researchers' interests is IoT-based Disaster management: a case of technological mitigation in Indonesia, the effect of LED light radiation on photosynthesis process using ingenhousz experiment.

**Asep Id Hadiana** received his master's degree in Enterprise Information System from Indonesian Computer Univerity and a Doctor of Philosophy from Universiti Technical of Malaysia Melaka (UTem). He is a lecturer in the Informatics Department, Faculty of Science and Informatics, Universitas Jenderal Achmad Yani. Amongst his research interest are Cyber Security, Data Mining, Spatial Analysis, Location Based Services and Geographic Information Systems.