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*Mr. Handrizal, S.Si., M.Comp.Sc. born in Pariaman on June 13, 1977. In 2003 he completed his bachelor degree in mathematics at Universitas Sumatera Utara (USU) Medan and in 2011 he completed his master degree in Computer Science at Universiti Malaysia Pahang (UMP) Malaysia, currently he is finishing his doctorate in Computer Science at Universitas Sumatera Utara (USU) Medan.*

*In 2017 he joined the Computer Science undergraduate study program at Universitas Sumatera Utara as a permanent lecturer and was trusted as an internal auditor at Unit Manajemen Mutu Universitas Sumatera Utara from 2017 to 2021.*

*The advice that Mr. Handrizal always remembers in his career so far is "Make it easy for other people's affairs, then Allah SWT will make things easier for you in this world and in the hereafter".*

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## Publications

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2026

Prosiding seminar internasional

### **Reciprocal Interaction Modeling and Community- Based Influence Measurement in Large Twitter Networks Using the Leiden and Louvain Algorithms**

HANDRIZAL , AINUL HIZRIADI

2026

Prosiding seminar internasional

### **A Multi-objective Orchestration Framework for Balancing Latency and Carbon Emissions in SDN Backbone Networks**

HANDRIZAL , HERRIYANCE

2025

Prosiding seminar internasional

### **Latency Compensation and State Synchronization Using Unity Netcode**

JOS TIMANTA TARIGAN , HANDRIZAL , ALEXANDER YUANATA

2025

Jurnal internasional bereputasi

### **Advancements in Detection of Top Influencer Marketing in the Airline Industry: A Combination of the Leiden Algorithm and Graph Coloring**

HANDRIZAL , POLTAK SIHOMBING , ERNA BUDHIARTI NABABAN , MOHAMMAD ANDRI BUDIMAN

2025

Jurnal internasional bereputasi

### **EcoRouting: Carbon-Aware Path Optimization in Green Internet Architectures**

HERRIYANCE , AMER SHARIF , HANDRIZAL

2025

Prosiding seminar internasional

### **The Combination of the Leiden Algorithm and Graph Coloring for Influencers Detection in Large Scale Social Networks**

HANDRIZAL , POLTAK SIHOMBING , ERNA BUDHIARTI NABABAN , MOHAMMAD ANDRI BUDIMAN

2025

Prosiding seminar internasional

## **A Comparative Analysis of Louvain and Leiden Coloring Algorithms in Influencer Detection**

HANDRIZAL , POLTAK SIHOMBING , ERNA BUDHIARTI NABABAN , MOHAMMAD ANDRI BUDIMAN

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2025

Buku referensi

## **Pengantar Komputasi Paralel dan Terdistribusi dengan Penerapan Machine Learning**

ELVIWANI , MUHAMMAD ZARLIS , HANDRIZAL , POLTAK SIHOMBING

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2025

Jurnal internasional bereputasi

## **Improving Road Safety in Indonesia: A Clustering Analysis of Traffic Accidents Using K-Medoids**

HANDRIZAL , HAYATUNNUFUS

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2025

Jurnal internasional bereputasi

## **An Improvement Of The Leiden Algorithm For Influencer Detection**

HANDRIZAL , POLTAK SIHOMBING , ERNA BUDHIARTI NABABAN , MOHAMMAD ANDRI BUDIMAN

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2025

Jurnal internasional bereputasi

## **An Improvement of Method for Difficulty Adjustment Based on Procedures In The Game "Lost Labyrinths: Rogue's Odyssey"**

JOS TIMANTA TARIGAN , HERRIYANCE , HANDRIZAL

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2024

Jurnal internasional bereputasi

## **Classification Of Corn Leaf Diseases Using Cnn: A Deep Learning Approach**

HANDRIZAL , FUZY YUSTIKA MANIK

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2024

Jurnal internasional bereputasi

## **Leiden Coloring Algorithm for Influencer Detection**

POLTAK SIHOMBING , ERNA BUDHIARTI NABABAN , MOHAMMAD ANDRI BUDIMAN , HANDRIZAL

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2024

Jurnal internasional bereputasi

## **Penentuan Tempat Evakuasi Korban Bencana Gempa dengan Metode Analytical Hierarchy Process (AHP) dan Vi&#353;ekriterijumsko Kompromisno Rangiranje (VIKOR)(Studi Kasus: Kota Medan)**

HANDRIZAL , FAUZAN NURAHMADI

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2024

Jurnal internasional bereputasi

## **A HYBRID APPROACH COMBINING LONG SHORT-TERM MEMORY AND RANDOM FOREST FEATURE SELECTION FOR NETWORK INTRUSION DETECTION**

FAUZAN NURAHMADI , HANDRIZAL

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## **Palm Oil Production Prediction Using Long Shortterm Memory Method**

DEWI SARTIKA BR GINTING , HANDRIZAL , HERRIYANCE

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## **Technique for order of preference by similarity to ideal solution (TOPSIS) method and Mapbox API for barbershop selection in medan**

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## **Determining investment priority in SMEs of medan city using analytical**

## **hierarchy process and technique for order preference by similarity to ideal solution**

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## **Mask detection at Pubbarama Buddhist center using enviroment of Mobilenet-SSD**

SRI MELVANI HARDI , HANDRIZAL

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## **Mask detection at Pubbarama Buddhist center using enviroment of Mobilenet-SSD**

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## **Analysis of Potential Hazards at the Sea With Artificial Neural Network And Accident Prevention With SOS Smart System Innovation**

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2024

Jurnal internasional bereputasi

## **Multi-Objective Method Combination Analysis Optimization on the Basis on Ration Analysis (MOORA) and Best First Search Algorithm In The Selection of Obstetrician and Gynecology Practices**

FAUZAN NURAHMADI , HANDRIZAL

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## **Combination of Case-Based Reasoning and Certainty Factor for Detection of Baby Blues Syndrome**

DESILIA SELVIDA , HANDRIZAL

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## **Comparison of Outstanding Employee Selection at Benu Coffee Roaster Using Brown-Gibson and Simple Additive Weighting (SAW) Methods**

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## **Sentiment Analysis Based On PUBGM Player Aspects From App Store Reviews Using Bidirectional Encoder Representation From Transformer(BERT)**

FUZY YUSTIKA MANIK , HANDRIZAL

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## **Securing and Compressing Text Files using The AES 256 Algorithm and Levenstein Code**

FAUZAN NURAHMADI , HANDRIZAL

2023

Jurnal internasional bereputasi

## **Sentiment Analysis Based on 7p Marketing Mix Aspects of The Indriver Application Service Using The Bert Algorithm, Based on User Reviews on The Google Play Store**

T.HENNY FEBRIANA HARUMY , HERRIYANCE , HANDRIZAL

2023

Jurnal internasional bereputasi

## **Aspect-Based Sentiment Analysis on Chatgpt in Twitter using Bidirectional Encoder Representations From Transformers (BERT)**

HANDRIZAL , ANANDHINI MEDIANTY NABABAN

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Jurnal internasional bereputasi

## **Analysis of Best First Search and Forward Chaining Algorithm on Diagnosis System of Broiler Chicken Diseases**

FAUZAN NURAHMADI , HANDRIZAL

2023

Jurnal internasional bereputasi

## **Algorithm Forward Chaining And Backward Chaining For Diagnosing Diabetes Mellitus**

HANDRIZAL , HAYATUNNUFUS

2022

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## **Comparison of Stout Code and Fibonacci Code Algorithm for File Compression Based on Android**

T.HENNY FEBRIANA HARUMY , HANDRIZAL

2020

Jurnal internasional bereputasi

## **Comparison of steepest ascent hill climbing algorithm and best first search algorithm in determining the shortest route for medan tourism**

DIAN RACHMAWATI , HANDRIZAL

## **Researches**

2025

Ipteks

## **Sistem Klasifikasi Tanaman Air Berdasarkan Kebutuhan Cahaya,CO2 serta Penempatan Tanaman pada Aquascape Menggunakan Citra Digital Dengan Pendekatan Deep Learning**

SRI MELVANI HARDI , HANDRIZAL

2025

Ipteks

## **Sistem Identifikasi Kebutuhan Cahaya Tanaman Air Aquascape Pada Citra Digital Menggunakan Deep Learning-Proposal Usulan Penelitian Terapan - Sri Melvani Hardi\_**

SRI MELVANI HARDI , HANDRIZAL , ANANDHINI MEDIANTY NABABAN , ALVIAN

2022

## **Inovasi Smart System "SOS" & Pencarian Lokasi Layanan Kesehatan Terdekat Berbasis Artificial Intelligence Protis Neural Network Untuk Peningkatan Kualitas Keselamatan Dan Kesehatan Masyarakat Pesisir**

T.HENNY FEBRIANA HARUMY , DEWI SARTIKA BR GINTING , HANDRIZAL

## **Community Services**

2023

Ipteks Bagi Masyarakat

## **Pengenalan Aplikasi IQRO Bersuara Berbasis Android pada sekolah Taman Kanak-Kanak TADIBIYAH Marindal**

T.HENNY FEBRIANA HARUMY , HERRIYANCE , HANDRIZAL

## **Intellectual Property Rights**

2026

Hak cipta nasional

## **Program Komputer Penerapan Algoritma Leiden Dalam Sistem Penentuan Calon Marketing Pemasaran Bisnis Berbasis Analisis Jaringan Sosial**

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2026

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## **Program Komputer Multi-Objective Orchestration Framework For Balancing Latency And Carbon Emissions**

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2025

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## **Program Komputer Ecorouting**

HANDRIZAL

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2025

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## **Pengantar Komputasi Paralel dan Terdistribusi dengan Penerapan Machine Learning**

ELVIWANI , MUHAMMAD ZARLIS , HANDRIZAL , POLTAK SIHOMBING

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2025

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## **Program Komputer Kombinasi Algoritma Leiden dan Graph Coloring Untuk Menentukan Top Influencer Marketing**

HANDRIZAL , POLTAK SIHOMBING , MOHAMMAD ANDRI BUDIMAN , ERNA BUDHIARTI NABABAN

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## **Kombinasi Algoritma Leiden Dan Graph Coloring untuk Menentukan Top Influencer Marketing**

HANDRIZAL , POLTAK SIHOMBING , MOHAMMAD ANDRI BUDIMAN , ERNA BUDHIARTI NABABAN

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