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🌐 [fasilkom-ti.usu.ac.id/en/lecturer/dian-rachmawati](https://fasilkom-ti.usu.ac.id/en/lecturer/dian-rachmawati)

*Dian Rachmawati S.Si, M.Kom was born in Semarang in July of 23, 1983. She started elementary school in 1988, then continued to primary school in 1994 at SMPN 1 and high school in 1997 at SMAN 1. Medan. She got a Bachelor of Mathematics from Universitas Sumatera Utara in 2005, then graduated "Summa Cum Laude" (GPA 4.0/4.0)", Master Degree from Universitas Gajah Mada in 2008.*

*In improving her skills, she joined several courses such as TRICOM Course Medan, Webmedia Training Center Medan, Web Design and Programming, and Computer Engineering Course by SMILE Group Yogyakarta. She followed Cloud Practitioner training by Amazon Web Services and got AWS Certified Cloud Practitioner. She also joined workshops related to Computer and Technology such as Indonesian Network for Technology - Industry Matching, Microsoft Academic Day- Conference, and How to write in impact factor journal-Workshop.*

*Since 2008, she has been a lecturer at the Faculty of Computer Science and Information Technology (Fasilkom-TI) Universitas Sumatera Utara until now (2021) with the functional position as a 'Lektor'. She was appointed as coach Universitas Sumatera Utara Delegation on ACM-ICPC Multiprovincial IDEAFUSE Programming Contest, 2018 - 2019, and coach programming competition in GEMASTIK 2019-2021. In office, she was appointed as head of Final Project Laboratory, a coordinator extension program of Computer Science, and coordinator of Research Group (Computer System and Data Security) in Fasilkom-TI. She is also a member of many organizations such as IEEE, APTIKOM, IPKIN, and KAGAMA.*

*She has a research interest in computer and data security, genetic algorithms, optimization, expert system, and graph theory. Some publications have been published in proceedings and journals that are available in SINTA or SCOPUS repository. Due to her interest in research and writing, she got "Best Presenter at Annual Applied Science and Engineering Conference (AASEC 2018)", Bandung, Indonesia.*

*While living as a lecturer, she got several experiences and motivation to make her more confident, dedicated, and talented. She has quotes in her life that "The challenge of being a great lecturer is how we are able to explain something complicated to be as simple as possible" and "Don't chase success too much. Success will present itself when we deserve it".*

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## Publications

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2026

Jurnal internasional bereputasi

### **A Hybrid DWT-DCT Image Steganography Framework with Quick Response-Assisted Elliptic Curve Cryptography Signcryption for Robust Message Recovery**

DIAN RACHMAWATI , MUHAMMAD HAIKAL RAHMAN

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2025

Prosiding seminar internasional

### **A Comparative Study of ETS and ARIMA Algorithms for Forecasting Indonesia's Rice Export and Import**

NURUL FAJRIAH PINEM , DIAN RACHMAWATI , DIAN PEBRIYANI

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2025

Prosiding seminar internasional

### **Secure File Protection in Microsoft Word through AES and Shamir Secret Sharing Integration**

ANANDHINI MEDIANTY NABABAN , DIAN RACHMAWATI , RIZKA AULIA PUTRI PANE

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2024

Prosiding seminar internasional

## **Implementation of the Cheapest Insertion Heuristic in Determining Medicine Distribution Routes by DP2KB Medan**

DIAN RACHMAWATI

2023

Prosiding seminar internasional

## **Combining Beaufort cipher and RSA-CRT algorithm in a hybrid scheme to secure images**

DIAN RACHMAWATI

2023

Prosiding seminar internasional

## **Implementation Combination of Case-Based Reasoning and Rule-Based Reasoning for Diagnosis of Herpes Disease**

DIAN RACHMAWATI , ELVIWANI

## **Researches**

2025

## **ANALISIS FORECASTING VOLUME EKSPOR DAN IMPOR BERAS (Oryza sativa) DENGAN AI FORECASTING METHODS**

DIAN RACHMAWATI

2025

## **ANALISIS FORECASTING VOLUME EKSPOR DAN IMPOR BERAS (Oryza sativa) DENGAN AI FORECASTING METHODS**

NURUL FAJRIAH PINEM , DIAN PEBRIYANI , DIAN RACHMAWATI , LOLA HATI

## **Intellectual Property Rights**

2025

Hak cipta nasional

## **A Comparative Study of Algorithm ETS and Algorithm Arima in Forecasting Indonesia's Rice Export and Import Values**

NURUL FAJRIAH PINEM , DIAN PEBRIYANI , MUHAMMAD HAIKAL RAHMAN , DIAN RACHMAWATI

2025

Hak cipta nasional

## **Aplikasi Pengamanan Gambar Dengan Algoritma Phony-Rsa**

DIAN RACHMAWATI

2025

Hak cipta nasional

## **Aplikasi Pengamanan Gambar Dengan Algoritma Somsuk-RSA**

DIAN RACHMAWATI

2024

Hak cipta nasional

## **Sistem Aplikasi Peringatan Banjir Perkotaan Real-Time Menggunakan Natural Language Generation Dan Google Map Platform Berbasis Artificial Intelligence of Things**

DIAN RACHMAWATI

2023

Paten nasional

## **SISTEM PERINGATAN BANJIR PERKOTAAN REAL-TIME MENGGUNAKAN NATURAL LANGUAGE GENERATION DAN GOOGLE MAPS PLATFORM BERBASIS ARTIFICIAL INTELLIGENCE OF THINGS**

DIAN RACHMAWATI , RIZKY AZMI SWANDY

2023  
Patent nasional

## **Alat Pendeteksi Banjir Perkotaan Real-time**

DIAN RACHMAWATI , RIZKY AZMI SWANDY

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2018  
Hak cipta nasional

## **MANUAL PENGGUNAAN PROGRAM KOMPUTER SISTEM PAKAR PENDETEKSI PEDIATRIC COMMON SKIN ALLERGIES**

DIAN RACHMAWATI

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2018  
Hak cipta nasional

## **SISTEM PAKAR PENDETEKSI PEDIATRIC COMMON SKIN ALLERGIES**

DIAN RACHMAWATI

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