Dian Rachmawati, S.Si., M.Kom.

Lecturer of Undergraduate Program in Computer Science Study Program
Faculty of Computer Science and Information Technology
Universitas Sumatera Utara

dian.rachmawati@usu.ac.id

Faculty of Computer Science and Information Technology's D Building

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".

Publications

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

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

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

2024
Prosiding seminar internasional

Image Messages Security Using the Elkamchouchi- Elshenawy-Shaban Algorithm, Logistic Chaos, and XOR

DIAN RACHMAWATI , MOHAMMAD ANDRI BUDIMAN , WILBERT

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

2021
Prosiding seminar internasional

Three-Pass Protocol Scheme for Securing Image Files Using the Hill Cipher 3x3 Algorithm

DIAN RACHMAWATI , MOHAMMAD ANDRI BUDIMAN

2021
Prosiding seminar internasional

The Comparison of Rice Codes and Even-Rodeh Codes Algorithms for Text Compression

DIAN RACHMAWATI , MOHAMMAD ANDRI BUDIMAN

2021
Prosiding seminar internasional

A Cryptocompression System Using AAÎ² Algorithm and Goldbach G1 Codes

DIAN RACHMAWATI , MOHAMMAD ANDRI BUDIMAN

2021
Prosiding seminar internasional

Haversine and Tabu Search in Determining the Nearest Bus Stop based on GIS

ADE CANDRA , DIAN RACHMAWATI

2021
Prosiding seminar internasional

A Comparative Performance Study of (s,c)-Dense Codes and Elias Delta Codes in Data Compression

MOHAMMAD ANDRI BUDIMAN , DIAN RACHMAWATI

2021
Prosiding seminar internasional

Analysis of Maximal Shift Algorithm and Rabin- Karp Algorithm in Graphic Design Dictionary

DIAN RACHMAWATI , AMALIA

2021
Prosiding seminar internasional

Implementation of Not so Naive and Burkhard-Keller Tree algorithms in Indonesian-Hokkien dictionary application

MOHAMMAD ANDRI BUDIMAN , DIAN RACHMAWATI

2020
Jurnal internasional bereputasi

Capacitated multi depot multi vehicle routing problem using genetic algorithm (case study: watering the medan city park)

POLTAK SIHOMBING , DIAN RACHMAWATI

2020
Jurnal internasional bereputasi

Rsa public key solving technique by using genetic algorithm

DIAN RACHMAWATI , MOHAMMAD ANDRI BUDIMAN

2020
Jurnal internasional bereputasi

An implementation of Rabin cryptography and Fibonacci codes algorithm in image files security and compression

AMALIA , DIAN RACHMAWATI

2018
Prosiding seminar internasional

An Expert System to Detect Pediatric Skin Allergies

DERYNE ANGGIA PARAMITA , DIAN RACHMAWATI , MOHAMMAD ANDRI BUDIMAN

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

2023

Penerapan Hybrid Cryptosystem Dengan Algoritma Elkamchouci-Elshenawy-Saban dan RC4

MOHAMMAD ANDRI BUDIMAN , DIAN RACHMAWATI

2019

SISTEM PENGAMANAN EMAIL BERBASIS DEPENDENT RSA

MOHAMMAD ANDRI BUDIMAN , DIAN RACHMAWATI

2018
Penelitian Unggulan Perguruan Tinggi

Sistem Pakar Pendeteksi Pediatric Common Skin Allergies

MOHAMMAD ANDRI BUDIMAN , DERYNE ANGGIA PARAMITA , DIAN RACHMAWATI , MUHAMMAD ADIB RIKZAN

Community Services

2025
Ipteks

MEMANFAATKAN TEKNOLOGI DALAM AGRIBISNIS MELALUI PENYULUHAN DI KECAMATAN MERDEKA KABUPATEN KARO SUMATERA UTARA

ISKANDARINI , TAVI SUPRIANA , NURUL FAJRIAH PINEM , LILY FAUZIA , DIAN RACHMAWATI

2023
Ipteks Bagi Masyarakat

Optimalisasi Tata Kelola Sekolah Islam Terpadu Berbasis Teknologi Informasi

ADE CANDRA , MOHAMMAD ANDRI BUDIMAN , INDRA AULIA , DIAN RACHMAWATI , IQBAL FAKHRIZA , ATIKHA AZMILA

Intellectual Property Rights

2025
Hak cipta nasional

A Comparative Study of Algorithm ETS and Algorithm Arima inForecasting 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 Platforn Berbasis Artificial Intelligence of Things

DIAN RACHMAWATI

2024
Hak cipta nasional

Aplikasi Pengamanan Pesan Gambar Dengan Algoritma Elkamchouchi-Elshenawy-Shaban, Logistic Chaos, Dan Xor

MOHAMMAD ANDRI BUDIMAN , 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
Paten nasional

Alat Pendeteksi Banjir Perkotaan Real-time

DIAN RACHMAWATI , RIZKY AZMI SWANDY

2018
Hak cipta nasional

MANUAL PENGGUNAAN PROGRAM KOMPUTER SISTEM PAKAR PENDETEKSI PEDIATRIC COMMON SKIN ALLERGIES

DIAN RACHMAWATI

2018
Hak cipta nasional

SISTEM PAKAR PENDETEKSI PEDIATRIC COMMON SKIN ALLERGIES

DIAN RACHMAWATI