

# Prof. Dr. Romi Fadillah Rahmat, B.Comp.Sc., M.Sc.

Dosen Program Studi S3 Ilmu Komputer  
Fakultas Ilmu Komputer dan Teknologi Informasi  
Universitas Sumatera Utara

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*Bapak Romi Fadillah Rahmat, lahir pada tanggal 3 Maret 1986 di Jakarta, beliau menyelesaikan pendidikan Sarjana Ilmu Komputer (Hons) pada tahun 2007 di Universiti Sains Malaysia, kemudian melanjutkan pendidikan S2 di bidang Ilmu Pengetahuan di universitas yang sama.*

*Memulai karirnya sebagai dosen tetap di Universitas Sumatera Utara sejak tahun 2010, Bapak Romi menjabat sebagai Ketua Program Studi Sarjana Teknik Informatika dari tahun 2017-2021. Karirnya di universitas terus berlanjut setelah diangkat menjadi Sekretaris Senat Akademik USU periode 2019-2024. Kemudian pada tahun 2021 beliau diangkat sebagai Wakil Dekan III Bidang Penelitian, Pengabdian kepada Masyarakat, Kerjasama dan Informasi. Sebelumnya beliau juga dipercaya sebagai ahli ITE oleh sebagian besar kepolisian di Wilayah Sumatera Utara. Bapak Romi juga pernah menjadi tenaga ahli dan konsultan LSM Caritas untuk program pemulihan Tsunami di Meulaboh, beliau juga pernah terlibat sebagai konsultan ahli pengembangan aplikasi di Dinas Pendapatan Kota Medan dari tahun 2011-2014, dan pernah menjabat sebagai Head IT Consultant PT. Dhiarga di Medan. Pada tahun 2019, Bapak Romi juga terlibat dalam proyek pemantauan orangutan yang didanai oleh USAID di Banda Aceh.*

*Bapak Romi Fadillah Rahmat memulai penelitiannya saat menempuh pendidikan S2 di Malaysia, dengan fokus penelitiannya saat itu adalah Brain-like Computing menggunakan Distributed Adaptive Neuro-Gen Learning Engine yang merupakan salah satu metode baru yang ia temukan. Kemudian Pak Romi juga mendapatkan 17 hibah penelitian dari tahun 2014 hingga sekarang, baik dari dana Kemendikbud maupun dari dana penelitian Talenta USU. Minat penelitiannya adalah komputasi mirip otak, pemrosesan gambar, visi gambar, pembelajaran mendalam, realitas virtual, pemrosesan waktu nyata, dan analisis data. Dia telah menerbitkan lebih dari 100 publikasi dengan 10 artikel jurnal internasional. Dia memenangkan tempat kedua sebagai Peneliti Terbaik pada tahun 2018 dari USU. Beliau menyelesaikan pendidikan terakhirnya pada jenjang S3, program studi Ilmu Komputer, di USU pada tahun 2024.*

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## Publications

2026

Jurnal internasional bereputasi

### **DyWIS: Dynamic Weighted Influence Score-Based Machine Learning for In-Game Win Loss Prediction in Elite Badminton Singles**

ROMI FADILLAH RAHMAT

2026

Jurnal internasional bereputasi

### **Evaluation and comparison of classification models for predicting crash severity**

ROSSI PASSARELLA , MASTURA DIANA MARIESKA , DEDY KURNIAWAN , ROMI FADILLAH RAHMAT , ISBATUDINIA , Harumy Veny

2026

Jurnal nasional terakreditasi

### **Multi-Detection System Using Faster R-CNN for Fish Species Classification and Quality Assessment on Android**

SHARFINA FAZA , ARIF RIDHO LUBIS , MERYATUL HUSNA , RINA ANUGRAHWATY , ROMI FADILLAH RAHMAT , M. RAFIF RASYIDI

2026

Prosiding seminar internasional

### **Classification of Cybercrime Cases Based on Type of ITE Law Article Using**

# Text Convolutional Neural Network

SARAH PURNAMAWATI , TRI MURTI LUBIS , FAHRURROZI LUBIS , ROMI FADILLAH RAHMAT , JANRIAN N SIMBOLON , IQBAL FAKHRIZA

2026

Prosiding seminar internasional

## Smart Helmet Compliance Ai-Driven Detection of Motorcycle Riders with ZFNet and Mobilenet SSD

FAHRURROZI LUBIS , AINUL HIZRIADI , ROMI FADILLAH RAHMAT , MUHAMMAD AMIN RAIS , ARYA PRATAMA TARIGAN , JONATHAN SIMANJUNTAK

2026

Prosiding seminar internasional

## Chain-of-Thought Prompting for Simulating Scam Interactions with Multi-Role Agents in Digital Literacy Education

MAYA SILVI LYDIA , ROMI FADILLAH RAHMAT , AMALIA , MOHAMMAD FADLY SYAH PUTRA , PAUZI IBRAHIM NAINGGOLAN , DANI GUNAWAN

2026

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## Immersive Virtual Reality-Based Throat Surgery Simulation: Design, Implementation, and Pedagogical Evaluation

ROMI FADILLAH RAHMAT , MOHAMMAD FADLY SYAH PUTRA , OPIM SALIM SITOMPUL , MAYA SILVI LYDIA , FAHMI , MUHAMMAD ARFIZA PUTRA SARAGIH , PAUZI IBRAHIM NAINGGOLAN , Riza Sulaiman

2026

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## IndoBERT for Indonesia Crime News Classification

ROMI FADILLAH RAHMAT , HERRIYANCE , FAHRURROZI LUBIS , AL- KHOWARIZMI , ROSSI PASSARELLA

2026

Prosiding seminar internasional

## Multi-Class Spam Classification in Bahasa Indonesia Messaging Platforms Using IndoBERT

AMALIA , MAYA SILVI LYDIA , PAUZI IBRAHIM NAINGGOLAN , ROMI FADILLAH RAHMAT

2026

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## Performance and Interpretability Study of VGG19 and ConvNeXt V2 for Multi-Stage Alzheimers Classification on Brain MRI

NURRAHMADAYENI , INSIDINI FAWWAZ , MOHAMMAD FADLY SYAH PUTRA , DESILIA SELVIDA , REGANIA PASCA RASSY , ROMI FADILLAH RAHMAT

2026

Prosiding seminar internasional

## Water Meter Monitoring System for Residential Using Mesh Network with Message Queuing Telemetry Transport (MQTT) Protocol

FAHRURROZI LUBIS , ROMI FADILLAH RAHMAT , MOHAMMAD FADLY SYAH PUTRA , AHMAD KODRI FAUZI HASIBUAN , ADITYA AMANDA PANE , MUHAMMAD RIDHO ABIDIN DAMANIK , Ika Veni Anisa , Prof. Dr. Ir. Riza Sulaiman , PAUZI IBRAHIM NAINGGOLAN

2026

Prosiding seminar internasional

## Comparison of VGG16 and Resnet50 Architectures in the Classification of Traditional Ulos of Batak Toba

ELVIAWATY MUISA ZAMZAMI , ROMI FADILLAH RAHMAT , ANANDHINI MEDIANTY NABABAN , NISKARTO ZENDRATO , FUZY YUSTIKA MANIK , RAYNHARD TARIHORAN

2026

Jurnal internasional bereputasi

## Hybrid Deep Convolutional Neural Network and Counter Propagation Neural Network as a Pork-Beef Differentiator System

ROMI FADILLAH RAHMAT , HERRIYANCE , ROSSI PASSARELLA , SHARFINA FAZA , Prof. Dr. Rahmat Budiarto , Farhad Nadi

2025

Jurnal internasional bereputasi

## Leveraging Real-time GTFS and Integrated Data for High-Accuracy LRT Departure Delay Prediction using Optimized Machine Learning

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2025

Prosiding seminar internasional

## **Enhancing Gradient Boosting Performance with Puma Optimizer for Predicting Customer Churn**

ROMI FADILLAH RAHMAT

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2025

Jurnal internasional bereputasi

## **An evaluation of nature-inspired meta-heuristic algorithms for hyperparameter optimization in reinforcement learning**

ROMI FADILLAH RAHMAT , ANDRE HASUDUNGAN LUBIS

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Jurnal internasional bereputasi

## **Reformulating Q-Learning as a Hybrid Classifier for Predictive Marketing Analytics**

ROMI FADILLAH RAHMAT , POLTAK SIHOMBING , ERNA BUDHIARTI NABABAN , ANDRE HASUDUNGAN LUBIS

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Prosiding seminar internasional

## **An Analytical Study of Easy Simple Factoring RSA (ESF-RSA) and Phony RSA Cryptosystem**

DIAN RACHMAWATI , MAYA SILVI LYDIA , MOHAMMAD ANDRI BUDIMAN , ROMI FADILLAH RAHMAT

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## **Comparative Study of Public Key Cryptosystem: Somsuk RSA vs Modified RSA**

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## **Indonesian Text Normalization for Spam Detection: Non-Standard Word Processing and Correction**

INSIDINI FAWWAZ , RENDRA MAHARDIKA , SYUKRATUN NUFUS, S.SI. , SHARFINA FAZA , ROMI FADILLAH RAHMAT

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2025

Prosiding seminar internasional

## **Detection and Counting Mangrove Trees Based on Drone Images in a Regional-Based Convolutional Neural Network Approach**

SHARFINA FAZA , ROMI FADILLAH RAHMAT , FAHRURROZI LUBIS , ONRIZAL

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## **Classification of Mangrove Flower Types Using Convolutional Neural Network**

FAHRURROZI LUBIS , ONRIZAL , ROMI FADILLAH RAHMAT , SHARFINA FAZA

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## **ENHANCING WATER QUALITY CLASSIFICATION IN LAKE TOBA WITH DEEP LEARNING APPROACH**

ROMI FADILLAH RAHMAT , SHARFINA FAZA , SARAH PURNAMAWATI

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## **MODIFICATION OF MULTILAYER PERCEPTRON USING DETECTION RATE MODEL FOR PREDICTION OF NOMINAL EXCHANGE RATE**

ROMI FADILLAH RAHMAT

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## **Computationally Enhanced UAV-Based Real-Time Pothole Detection Using YOLOv7-C3ECA-DSA Algorithm**

ROMI FADILLAH RAHMAT

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## **Computationally Efficient Single Layer Transformer Convolutional Encoder for Accurate Price Prediction of Agriculture Commodities**

ROMI FADILLAH RAHMAT

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## **Integrated Smart Parking System Using Internet of Things (IoT) and Digital Image Processing with Faster Region Based Convolutional Neural Network (Faster R-CNN) and Optical Character Recognition (OCR)**

FAHRURROZI LUBIS , PAUZI IBRAHIM NAINGGOLAN , MOHAMMAD FADLY SYAH PUTRA , ROMI FADILLAH RAHMAT , ALBERT LUKAS TALUPAN PANGARIBUAN , Riza Sulaiman , ERNA BUDHIARTI NABABAN

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## **Gated Recurrent Unit in Malaria Forecasting with Meteorological and Clinical Data**

ROMI FADILLAH RAHMAT , FAHMI , AYODHIA PITALOKA

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## **IDENTIFICATION OF PAPAYA VARIETIES IN COMPUTER VISION AND DEEP LEARNING APPROACHES**

AJULIO PADLY SEMBIRING , SHARFINA FAZA , MERYATUL HUSNA , ROMI FADILLAH RAHMAT

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## **Detection and Classification of Mosquito Larvae Based on Deep Learning Approach**

PAUZI IBRAHIM NAINGGOLAN , SYAHRIL EFENDI , MOHAMMAD ANDRI BUDIMAN , MAYA SILVI LYDIA , ROMI FADILLAH RAHMAT , DHANI SYAHPUTRA BUKIT , UMI SALMAH , SRI MALEM INDIRAWATI , Riza Sulaiman

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## **Classification of Single Tuition Fee with Imbalanced Data Using XGBoost and SMOTE**

MAYA SILVI LYDIA , AMALIA , ROMI FADILLAH RAHMAT , MUHAMMAD ISA DADI HASIBUAN

2024

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## **Identification of Mangrove Leaf Disease in Deep Convolutional Neural Network Approach**

FAHRURROZI LUBIS , ROMI FADILLAH RAHMAT , MAYA SILVI LYDIA , FAHMI

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## **Extreme Learning Machine for Parking Slot Recognition in Smart Parking System**

SHARFINA FAZA , PAUZI IBRAHIM NAINGGOLAN , ROMI FADILLAH RAHMAT

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## **A Machine Learning Approach to pH Monitoring: Mango Leaf Colorimetry in Aquaculture**

ROMI FADILLAH RAHMAT

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## **Analysis of Spelling Errors in Text Data Using Graph Neural Networks (GNNs) Based on Machine Learning**

ROMI FADILLAH RAHMAT

2024

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## **Logistic Regression for Merchant Customer Churn Prediction: A Data-Driven**

## Approach

ANANDHINI MEDIANTY NABABAN , FANINDIA PURNAMASARI , MARISCHA ELVENY , NISKARTO ZENDRATO , U MAYA RAMADHANI PUTRI NASUTION , ROMI FADILLAH RAHMAT , CHATARINA S FRANSISKA SAMOSIR

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### **Detection of ammonia in aquaculture wastewater using mango leaf extract-immobilized paper sensors and smartphone colorimetric analysis**

ROMI FADILLAH RAHMAT , Farhad Nadi , Shahadat Hossain , Hajar Rastegari

2024

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### **Car Security System Based on Facial Recognition With Convolutional Neural Networks**

SHARFINA FAZA , ROSSY NURHASANAH , FAHRURROZI LUBIS , ROMI FADILLAH RAHMAT , EFRAIM EMDASTRA SINULINGGA , Rahmat Budiarto

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### **A Hybrid of Extreme Learning Machine and Cellular Neural Network Segmentation in Mangrove Fruit Classification**

FAHMI , OPIM SALIM SITOMPUL , PAUZI IBRAHIM NAINGGOLAN , Riza Sulaiman , MAYA SILVI LYDIA , ROMI FADILLAH RAHMAT

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### **DEEP LEARNING-DRIVEN CAR PARKING SPACE DETECTION: A YOLOR APPROACH**

ROMI FADILLAH RAHMAT

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### **Human blood group type detection prototype focusing on agglutinin using microcontroller based photodiode**

AL- KHOWARIZMI , ROMI FADILLAH RAHMAT , MUHARMAN LUBIS , ARIF RIDHO LUBIS

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### **Extreme learning machine approach on heart abnormalities identification in ECG images**

ROMI FADILLAH RAHMAT , U MAYA RAMADHANI PUTRI NASUTION , AL- KHOWARIZMI , ANANDHINI MEDIANTY NABABAN , Farhad Nadi , Rahmat Budiarto

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### **Extreme learning machine approach on heart abnormalities identification in ECG images**

ROMI FADILLAH RAHMAT , ANANDHINI MEDIANTY NABABAN , U MAYA RAMADHANI PUTRI NASUTION

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### **Deep Learning Based Entropy Controlled Optimization for the Detection of Covid-19**

ROMI FADILLAH RAHMAT , Mohammed Alonazi , Sara A. Althubiti , Abdullah Alshammari , Jiong Chen

2024

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### **Early identification of gastric pains through the tongue images using radial basis function**

AINUL HUSNA , Nur Intan Raihana Ruhayem , SHARFINA FAZA , ROMI FADILLAH RAHMAT , AINUL HIZRIADI , HERRIYANCE

2024

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### **Classification of Normal Lung Image, Bronchitis, And Tuberculosis Using Extreme Learning Machine**

MOHAMMAD FADLY SYAH PUTRA , DEVY IRIANI PURBA , RINA ANUGRAHWATY , PAUZI IBRAHIM NAINGGOLAN , SILMI , ROMI FADILLAH RAHMAT

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## **Classification of Normal Lung Image, Bronchitis, And Tuberculosis Using Extreme Learning Machine**

MOHAMMAD FADLY SYAH PUTRA , PAUZI IBRAHIM NAINGGOLAN , ROMI FADILLAH RAHMAT

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## **Skin Cancer Image Classification Based on Cancer Malignancy on Deep Convolutional Neural Network (DCNN)**

MARISCHA ELVENY , ROSSY NURHASANAH , UMayA RAMADHANI PUTRI NASUTION , ROMI FADILLAH RAHMAT , Tifani Zata Lini

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2024

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## **Braille letter recognition in deep convolutional neural network with horizontal and vertical projection**

SARAH PURNAMAWATI , ARIF RIDHO LUBIS , WILLY MARDIANTO , Riza Sulaiman , Farhad Nadi , ROMI FADILLAH RAHMAT , SHARFINA FAZA

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2024

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## **Dust Particle Matter (2.5) with Meteorological Parameters to Predict Air Quality Based on Support Vector Machine Approaches**

HAYATUNNUFUS , FAHRURROZI LUBIS , ROMI FADILLAH RAHMAT , AINUL HIZRIADI , HERRIYANCE

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## **Classification Of Aedes Mosquito Larva Using Convolutional Neural Networks And Extreme Learning Machine**

EDI SUBROTO , MAYA SILVI LYDIA , Ledy Afrida Sinaga , MOHAMMAD ANDRI BUDIMAN , SYAHRIL EFENDI , PAUZI IBRAHIM NAINGGOLAN , DHANI SYAHPUTRA BUKIT , ROMI FADILLAH RAHMAT

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## **Sentiment Analysis Using Large Language Models: A Case Study of GPT-3.5**

ROMI FADILLAH RAHMAT , Farhad Nadi

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## **Classification of Conductive Block Disorders Based on Electrocardiogram Images Using Support Vector Machine**

UMAYA RAMADHANI PUTRI NASUTION , ANANDHINI MEDIANTY NABABAN , ROMI FADILLAH RAHMAT , Farhad Nadi

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2024

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## **Identification of Lung Cancer in Chest X-Ray Images Using Convolutional Neural Network**

AINA HUBBY AZIIRA , HERRIYANCE , ROMI FADILLAH RAHMAT , FAHRURROZI LUBIS

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2024

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## **AUTOMATIC GENERATION OF MULTIPLE-CHOICE QUESTIONS USING TEMPLATE-BASED SEMANTIC WEB IN INDONESIAN LANGUAGE**

SHARFINA FAZA , DANI GUNAWAN , RINA ANUGRAHWATY , SILMI , ROMI FADILLAH RAHMAT

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2024

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## **Menu Classification using KNN and Naïve Bayes Algorithms at Kopi Krintji Cafe**

ROMI FADILLAH RAHMAT , Rahmat Budiarto

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2023

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## **Random Forest Classification in Cocoa Pods Disease**

PAUZI IBRAHIM NAINGGOLAN , UMayA RAMADHANI PUTRI NASUTION , ANANDHINI MEDIANTY NABABAN , ROMI

2023

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## **Classification of Types of Betel Leaves (Piper Betel Linn) Using An Android-Based Neural Network Backpropagation**

FAHRURROZI LUBIS , MOHAMMAD FADLY SYAH PUTRA , ROMI FADILLAH RAHMAT , PAUZI IBRAHIM NAINGGOLAN , DHANI SYAHPUTRA BUKIT

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## **The Role of Faster R-CNN Algorithm in the Internet of Things to Detect Mask Wearing: The Endemic Preparations**

ROMI FADILLAH RAHMAT , MUHARMAN LUBIS , AL- KHOWARIZMI , ARIF RIDHO LUBIS

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## **KIDNEY STONES IDENTIFICATION UTILIZING EXTREME LEARNING MACHINE**

SHARFINA FAZA , AJULIO PADLY SEMBIRING , MERYATUL HUSNA , ROMI FADILLAH RAHMAT

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## **Classifying Indonesian Cyber Crime Cases under ITE Law Using a Hybrid of Mutual Information and Support Vector Machine**

AINA HUBBY AZIIRA , ROMI FADILLAH RAHMAT , SARAH PURNAMAWATI , SHARFINA FAZA , AL- KHOWARIZMI

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## **Internet of Things in aquaculture: A review of the challenges and potential solutions based on current and future trends**

ROMI FADILLAH RAHMAT

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## **Observing the Performance of the TextRank Algorithm on Automatic Text Summarization for Bahasa Indonesia**

AMALIA , DEDY SYAMSUAR , ROMI FADILLAH RAHMAT , Abdurrohman , DEDEN WITARSYAH , DANI GUNAWAN

2023

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## **Mangrove Fruit Ripeness Classification Using Deep Convolutional Neural Network**

RINA ANUGRAHWATY , SHARFINA FAZA , AJULIO PADLY SEMBIRING , MERYATUL HUSNA , ROMI FADILLAH RAHMAT

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## **Identification of Safe Air Quality for Activity Using Long Short-Term Memory**

ROMI FADILLAH RAHMAT , FAHRURROZI LUBIS

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## **Astrocytoma, ependymoma, and oligodendroglioma classification with deep convolutional neural network**

SARAH PURNAMAWATI , ROMI FADILLAH RAHMAT

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## **Astrocytoma, ependymoma, and oligodendroglioma classification with deep convolutional neural network**

ARIF RIDHO LUBIS , SHARFINA FAZA , ROMI FADILLAH RAHMAT , AL- KHOWARIZMI

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## **Information technology based smart farming model development in agriculture land**

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## **LAKE TOBA WATER QUALITY PREDICTION USING EXTREME MACHINE LEARNING**

ROMI FADILLAH RAHMAT , SARAH PURNAMAWATI

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## **News Articles Classification for Electronic Information and Transaction Law in Indonesia using Support Vector Machine**

SHARFINA FAZA , SILMI , ROMI FADILLAH RAHMAT , DANI GUNAWAN

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## **Classification of Primary and Secondary Brain Tumor Using Extreme Learning Machine**

SHARFINA FAZA , ROMI FADILLAH RAHMAT , AL- KHOWARIZMI , ERNA BUDHIARTI NABABAN

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## **News Articles Classification for Electronic Information and Transaction Law in Indonesia using Support Vector Machine**

DANI GUNAWAN , ROMI FADILLAH RAHMAT

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## **Classification of Primary and Secondary Brain Tumor Using Extreme Learning Machine**

ROMI FADILLAH RAHMAT , ERNA BUDHIARTI NABABAN

2021

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## **Classification of Mangrove Sprouts Based on Its Morphological Measurement**

ROMI FADILLAH RAHMAT

2021

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## **Classification of Mangrove Sprouts Based on Its Morphological Measurement**

SHARFINA FAZA , MERYATUL HUSNA , RINA ANUGRAHWATY , ANDI SUPRIADI CHAN , AJULIO PADLY SEMBIRING , ROMI FADILLAH RAHMAT

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## **Air Quality Classification Using Naive Bayes Classifier on Distributed Raspberry Pi Cluster System**

ROMI FADILLAH RAHMAT , SARAH PURNAMAWATI

2021

Jurnal internasional bereputasi

## **IDENTIFICATION OF THE FISH SURVIVAL RATE AND THE FISH TYPES TO LIVE IN LAKE TOBA USING MACHINE LEARNING**

INDRA AULIA , SARAH PURNAMAWATI , ROMI FADILLAH RAHMAT

2021

Jurnal nasional terakreditasi

## **Financial management efficiency of islamic boarding school based on information technology**

SENIMAN , ROMI FADILLAH RAHMAT , SAWALUDDIN , DEDY ARISANDI

2021

Prosiding seminar internasional

## **Identification of Lung Cancer on Chest X-Ray (CXR) Medical Images Using the Probabilistic Neural Network Method**

MOHAMMAD FADLY SYAH PUTRA , ROMI FADILLAH RAHMAT

2020

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## **Frogs Sound Detection to Control The Population of Frogs as Pests Using Mel-frequency Cepstral Coefficient-Vector Quantization (MFCC-VQ) Algorithm**

ERNA BUDHIARTI NABABAN , INSIDINI FAWWAZ , SHARFINA FAZA , ROMI FADILLAH RAHMAT

2020

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## **Keyword Extraction from Scientific Articles in Bahasa Indonesia using TextRank Algorithm**

DANI GUNAWAN , FANINDIA PURNAMASARI , ROMI FADILLAH RAHMAT

2020

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## **Sparse Matrix Implementation on Personal News Recommendation for Anonymous User**

DETANIA SUKARJA , SARAH PURNAMAWATI , TRI MURTI LUBIS , ROMI FADILLAH RAHMAT

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## **Frogs Sound Detection to Control The Population of Frogs as Pests Using Mel-frequency Cepstral Coefficient-Vector Quantization (MFCC-VQ) Algorithm**

ERNA BUDHIARTI NABABAN , ROMI FADILLAH RAHMAT

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## **Prediction of Regional Revenue and Expenditure Budget using Autoregressive Integrated Moving Average (ARIMA)**

SHARFINA FAZA , ROMI FADILLAH RAHMAT , DEDY ARISANDI

2020

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## **Facial Recognition-Based Automatic Door Access System Using Extreme Learning Machine**

INDRA AULIA , ROMI FADILLAH RAHMAT

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## **Prediction of Regional Revenue and Expenditure Budget using Autoregressive Integrated Moving Average (ARIMA)**

DEDY ARISANDI , ROMI FADILLAH RAHMAT

2019

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## **Facial Recognition for Car Security System Using Fisherface Method**

DEDY ARISANDI , ROMI FADILLAH RAHMAT

2019

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## **Android-based automatic detection and measurement system of highway billboard for tax calculation in Indonesia**

SARAH PURNAMAWATI , ROMI FADILLAH RAHMAT , TRI MURTI LUBIS

2018

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## **A real time mobile-based face recognition with fisherface methods**

SARAH PURNAMAWATI , ROMI FADILLAH RAHMAT , MOHAMMAD FADLY SYAH PUTRA , DEDY ARISANDI

2018

Prosiding seminar internasional

## **Identifying strengths and weaknesses of Quality Management Unit University of Sumatera Utara software using SCAMPI C**

IKHSAN SIREGAR , DANI GUNAWAN , AMALIA , ROMI FADILLAH RAHMAT , MUHAMMAD ANGGIA MUCHTAR

2017

Prosiding seminar internasional

# Real time monitoring system for water pollution in Lake Toba

MOHAMMAD FADLY SYAH PUTRA , MAYA SILVI LYDIA , ROMI FADILLAH RAHMAT

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2017

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## Organization Readiness and ERP Implementation in Albaha University

ROMI FADILLAH RAHMAT

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## Researches

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2025

### KLASIFIKASI KASUS CYBERCRIME DENGAN TEXT CONVOLUTIONAL NEURAL NETWORK

SARAH PURNAMAWATI , TRI MURTI LUBIS , ROMI FADILLAH RAHMAT

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2025

### Smart System Prediksi Radiasi Matahari dengan Enhanced Deep Learning

SARAH PURNAMAWATI , HERRIYANCE , ROSSY NURHASANAH , ROMI FADILLAH RAHMAT

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2024

### SMART SYSTEM UNTUK KLASIFIKASI JENIS NYAMUK BERDASARKAN PENDEKATAN DEEP LEARNING

ROSSY NURHASANAH , ROMI FADILLAH RAHMAT , FAHRURROZI LUBIS , Riza Sulaiman

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2024

### TRANSLASI BAHASA ISYARAT DENGAN BI-LONG SHORT-TERM MEMORY

SARAH PURNAMAWATI , AINUL HIZRIADI , ROMI FADILLAH RAHMAT , FAHRURROZI LUBIS

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2023

### DEEP NEURAL NETWORK DI DALAM KLASIFIKASI KUALITAS AIR

SARAH PURNAMAWATI , ROMI FADILLAH RAHMAT

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2023

Penelitian Dana Lokal Perguruan Tinggi

### PENDEKATAN DEEP LEARNING DI DALAM PREDIKSI PENYEBARAN MALARIA

SARAH PURNAMAWATI , ROMI FADILLAH RAHMAT , FAHRURROZI LUBIS

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2023

### Pendekatan Deep Learning di dalam Pendeteksian dan Klasifikasi Jalan Retak dan Berlubang

ROMI FADILLAH RAHMAT , PAUZI IBRAHIM NAINGGOLAN , MOHAMMAD FADLY SYAH PUTRA , Riza Sulaiman

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2022

### DETEKSI DAN KLASIFIKASI TUMBUHAN MANGROVE SECARA AUTONOMOUS PADA PERANGKAT MOBILE

ROMI FADILLAH RAHMAT , PAUZI IBRAHIM NAINGGOLAN

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2022

### IDENTIFIKASI DAN KLASIFIKASI JENIS MANGROVE BESERTA ZONA TANAM MANGROVE DENGAN INTERNET OF THINGS DAN ADVANCE MACHINE LEARNING

SARAH PURNAMAWATI , ROMI FADILLAH RAHMAT , ONRIZAL

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2021

Penelitian Dana Lokal Perguruan Tinggi

### KLAFIKASI TEXT MINING DARI BERITA KEJAHATAN CYBER DENGAN MACHINE LEARNING

SARAH PURNAMAWATI , ROMI FADILLAH RAHMAT , PENTARI TRIMITA PAKPAHAN , YUNITA S MARITO PANE

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2021

Penelitian Dana Lokal Perguruan Tinggi

## **DEEP LEARNING UNTUK KLASIFIKASI CITRA BRAILLE**

SARAH PURNAMAWATI , ROMI FADILLAH RAHMAT , FENTA GRATA , WILLY MARDIANTO

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2021

Penelitian Unggulan Perguruan Tinggi

## **SISTEM KLASIFIKASI JENIS MANGROVE BERDASARKAN CITRA MORFOLOGI**

SARAH PURNAMAWATI , ROMI FADILLAH RAHMAT , RHAMA PERMADI AHMAD , SHIFANI ADRIANI CH.

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2021

Penelitian Unggulan Perguruan Tinggi

## **KLASIFIKASI BIG DATA MONITORING CUACA DAN AIR MENGGUNAKAN ADAPTIVE NEURAL NETWORK**

SARAH PURNAMAWATI , ROMI FADILLAH RAHMAT

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2020

Penelitian Unggulan Perguruan Tinggi

## **SISTEM KLASIFIKASI JENIS MANGROVE BERDASARKAN CITRA MORFOLOGI**

SARAH PURNAMAWATI , ROMI FADILLAH RAHMAT

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2020

Penelitian Dana Lokal Perguruan Tinggi

## **PENERAPAN DAN AUTOMASI SISTEM PENDETEKSIAN TUMOR OTAK PADA CITRA MRI DENGAN PENDEKATAN KECERDASAN BUATAN**

SARAH PURNAMAWATI , ROMI FADILLAH RAHMAT , HALIMATUSSADIAH , MHD. FARIS PRATAMA

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2020

Penelitian Dana Lokal Perguruan Tinggi

## **APLIKASI REKOMENDASI BERITA CYBER CRIME DENGAN METODE SPARSE MATRIX REPRESENTATION**

SARAH PURNAMAWATI , ROMI FADILLAH RAHMAT

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2020

Penelitian Unggulan Perguruan Tinggi

## **KLASIFIKASI BIG DATA MONITORING CUACA DAN AIR MENGGUNAKAN ADAPTIVE NEURAL NETWORK**

SARAH PURNAMAWATI , ROMI FADILLAH RAHMAT

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2019

Penelitian Dana Lokal Perguruan Tinggi

## **IDENTIFIKASI KUALITAS AIR DANAU TOBA DENGAN PENDEKATAN DEEP LEARNING**

SARAH PURNAMAWATI , ROMI FADILLAH RAHMAT

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2019

Penelitian Unggulan Perguruan Tinggi

## **PENGEMBANGAN DISTRIBUTED ADAPTIVE NEURAL NETWORK DAN KETERKAITAN DENGAN DEEP LEARNING**

SARAH PURNAMAWATI , OPIM SALIM SITOMPUL , ROMI FADILLAH RAHMAT , DENNIS

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2019

Penelitian Dana Lokal Perguruan Tinggi

## **KLASIFIKASI PADA CITRA MEDIS DIGITAL MELALUI PENDEKATAN ADVANCE MACHINE LEARNING**

SARAH PURNAMAWATI , ROMI FADILLAH RAHMAT

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2019

Penelitian Dana Lokal Perguruan Tinggi

## **PENGENALAN DAN DETEKSI PAPAN IKLAN JALAN RAYA BERBASIS ANDROID**

SARAH PURNAMAWATI , ROMI FADILLAH RAHMAT , HANDRA SAITO

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2019

Penelitian Unggulan Perguruan Tinggi

## **SISTEM CERDAS PEMANTAUAN LINGKUNGAN SECARA REAL TIME DENGAN PENGOPTIMALAN ADVANCE MACHINE LEARNING**

2019

Penelitian Dana Lokal Perguruan Tinggi

### **PENDETEKSIAN RUANG PARKIR KOSONG DALAM SISTEM PARKIR MOBIL DENGAN KECERDASAN BUATAN**

SARAH PURNAMAWATI , ROMI FADILLAH RAHMAT , JOKO KURNIANTO

2018

Penelitian Unggulan Perguruan Tinggi

### **PENGEMBANGAN DISTRIBUTED ADAPTIVE NEURAL NETWORK DAN KETERKAITAN DENGAN DEEP LEARNING**

SARAH PURNAMAWATI , OPIM SALIM SITOMPUL , ROMI FADILLAH RAHMAT , DENNIS

2018

Penelitian Unggulan Perguruan Tinggi

### **SISTEM CERDAS PEMANTAUAN LINGKUNGAN SECARA REAL TIME DENGAN PENGOPTIMALAN ADVANCE MACHINE LEARNING**

SARAH PURNAMAWATI , TIGOR HAMONANGAN NASUTION , ROMI FADILLAH RAHMAT , REZA TAQYUDDIN

2017

Penelitian Dana Lokal Perguruan Tinggi

### **PENGENALAN GERAKAN TANGAN STATIS PADA INTERAKSI MANUSIA - KOMPUTER**

OPIM SALIM SITOMPUL , ROMI FADILLAH RAHMAT , TENGGU CHAIRUNNISA

2017

Penelitian Dana Lokal Perguruan Tinggi

### **PENGENALAN GERAKAN TANGAN DINAMIS MENGGUNAKAN DEEP LEARNING**

SARAH PURNAMAWATI , ROMI FADILLAH RAHMAT , EKA PRATIWI GOENFI

2016

### **SEGMENTASI WARNA KULIT PADA CITRA MENGGUNAKAN TIGA RUANG WARNA**

SARAH PURNAMAWATI , ROMI FADILLAH RAHMAT

2016

Penelitian Dana Lokal Perguruan Tinggi

### **PEMULIHAN FILE YANG TELAH TERHAPUS DARI FILE SYSTEM DI DALAM KOMPUTER FORENSIK**

SENIMAN , OPIM SALIM SITOMPUL , ROMI FADILLAH RAHMAT , ANDREW HANDOKO

2016

Penelitian Hibah Bersaing

### **SISTEM REAL-TIME SENSOR UNTUK PEMANTAUAN DAN ANALISIS KUALITAS AIR DANAU TOBA MENGGUNAKAN CONCURRENT DISTRIBUTED ADAPTIVE NEURAL NETWORK (C-DANN)**

ROMI FADILLAH RAHMAT , MAYA SILVI LYDIA , MOHAMMAD FADLY SYAH PUTRA , ERIC SUWARNO , ATHMANATHAN

## **Community Services**

2025

Ipteks Bagi Masyarakat

### **CYBER SECURITY AWARENESS: PEMBANGUNAN APLIKASI CHAT-BOT BERBASIS ARTIFICIAL INTELLIGENCE SERTA DAMPAK DAN ANCAMAN PESAN SCAM UNTUK SISWA SEKOLAH INDONESIA BANGKOK**

AMALIA , ROMI FADILLAH RAHMAT , PAUZI IBRAHIM NAINGGOLAN , MAYA SILVI LYDIA , IVANNY PUTRI MARIANTO

2025

Ipteks Bagi Masyarakat

### **Pelatihan Editing Video dan Gambar dengan Menggunakan Software Aplikasi Ulead Video Studio (UVS) di Pondok Pesantren Tahfizd Al-Qu'ran dan Hadist**

## Al-Faiz

SARAH PURNAMAWATI , HERRIYANCE , HANDRIZAL , ROMI FADILLAH RAHMAT , FAHRURROZI LUBIS

2025

### **Pembuatan Absensi Deteksi Wajah untuk Kehadiran Pegawai Berbasis Web di Madrasah Aliyah Swasta Al Ittihadiyah Medan**

SARAH PURNAMAWATI , HERRIYANCE , HANDRIZAL , ROMI FADILLAH RAHMAT , POLTAK SIHOMBING

2025

Penelitian Dana Lokal Perguruan Tinggi

### **Mitigasi Risiko Generative AI Pendidikan di SMA Lab. School Unsyiah : Etika dan Pencegahan Penipuan Akademik**

AMALIA , ROMI FADILLAH RAHMAT , MAYA SILVI LYDIA , MOHAMMAD FADLY SYAH PUTRA , Melinda

2024

### **Pembuatan Absensi Online pada Sistem Website Ma'had Tafidz Al- Quran Yatim Dhuafa Kitabina 1 Yayasan Fadhilatul Quran Aceh**

T.HENNY FEBRIANA HARUMY , HERRIYANCE , HANDRIZAL , SENIMAN , ROMI FADILLAH RAHMAT , ELVIAWATY MUISA ZAMZAMI , FAHRURROZI LUBIS

2024

Ipteks Bagi Masyarakat

### **Pelatihan Pembuatan Poster Dijital dan Editing Video dengan Menggunakan Software Aplikasi Canva Online di Pondok Pesantren TAHFIDZ AL-QUR'AN DAN HADIST AL-FAIZ**

SARAH PURNAMAWATI , HERRIYANCE , HANDRIZAL , ROMI FADILLAH RAHMAT , POLTAK SIHOMBING

2023

### **Sistem Absensi Tenaga Pendidik Dengan RFID Pada Sekolah Madrasah Ibtidaiyah Swasta Lukman Al-Hakim Pondok Pesantren Hidayatullah Medan**

HERRIYANCE , ROMI FADILLAH RAHMAT , POLTAK SIHOMBING , FAHRURROZI LUBIS

2023

### **Pembuatan Website dan Analisa Grafika Pada MA'had Tafidz Al- Quran Yatim Dhuafa Kitabina 1 Yayasan Fadhilatul Quran Aceh, Medan**

HERRIYANCE , HANDRIZAL , ROMI FADILLAH RAHMAT , ELVIAWATY MUISA ZAMZAMI , POLTAK SIHOMBING , FAHRURROZI LUBIS , PIETER TANOTO , BIMA , SAID UMAR , REGGY ARAUNA ARITONANG , SAMUEL MAGIRA PARSAORAN MARHAEN SIAHAAN , ADI TEGUH PRAMONO , REYVO PRAWIRA SILAEN , REYSHA TAZHA FADILLAH , MUHAMMAD HAIKAL RAHMAN , ANNISA KHAIRINA , RIZKI WAHYUDI

2022

### **INOVASI PENGEMBANGAN APLIKASI REKAM MEDIS DAN INFORMASI KESEHATAN MASYARAKAT PUSKESMAS PASAR MERAH KOTA MEDAN**

ROMI FADILLAH RAHMAT , MOHAMMAD FADLY SYAH PUTRA , FAHRURROZI LUBIS

2022

### **Pemanfaatan Teknologi untuk Informasi Broadcast Kegiatan Administrasi Sekolah Madrasah Ibtidaiyah Swasta (MIS) Luqman Al-Hakim Yayasan Pondok Pesantren Hidayatullah Medan**

HERRIYANCE , ROMI FADILLAH RAHMAT , POLTAK SIHOMBING

2022

### **Saksi Ahli ITE dengan Kepolisian Negara Republik Indonesia Daerah Sumatera Utara Resor Labuhan Batu**

ROMI FADILLAH RAHMAT

2019

Ipteks Bagi Masyarakat

### **Pelatihan dan Pendidikan Hukum Transaksi Jual Beli Online untuk Remaja**

YETI MELIANY LUBIS , TRI MURTI LUBIS , ROMI FADILLAH RAHMAT , DETANIA SUKARJA

2019

Ipteks Bagi Masyarakat

### **Peningkatan Efisiensi dan Efektivitas Pengelolaan Keuangan Pondok Pesantren Berbasis Teknologi Informasi**

# Intellectual Property Rights

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2022

Hak cipta nasional

## Principles Of Experimental Design

ROMI FADILLAH RAHMAT

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2022

Hak cipta nasional

## Research Phase Part I

ROMI FADILLAH RAHMAT

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2022

Hak cipta nasional

## Defining Problem Statement & Basic Research

ROMI FADILLAH RAHMAT

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2022

Hak cipta nasional

## Sampling And Intro To Research

ROMI FADILLAH RAHMAT

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2022

Hak cipta nasional

## Experimental Design

ROMI FADILLAH RAHMAT

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2022

Hak cipta nasional

## Intro To Literature And Implementation Of Literature Review

ROMI FADILLAH RAHMAT

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2022

Hak cipta nasional

## Profession Ethic And Online Plagiarism System

ROMI FADILLAH RAHMAT

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2022

Hak cipta nasional

## Research Phase Part II

ROMI FADILLAH RAHMAT

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2022

Hak cipta nasional

## Step By Step For Literature Survey And Resource For Literature Review

ROMI FADILLAH RAHMAT

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2022

Hak cipta nasional

## Research Design

ROMI FADILLAH RAHMAT

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2022

Hak cipta nasional

## KLASIFIKASI CIPTA PARU-PARU BRONKITIS DAN TBC DENGAN EXTREME LEARNING MACHINE

HERRIYANCE , FAHRURROZI LUBIS , ROMI FADILLAH RAHMAT

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2022

Hak cipta nasional

## MODUL PENGGUNA APLIKASI IDENTIFIKASI IKAN AIR TAWAR DI DANAU TOBA DENGAN SVM

ROMI FADILLAH RAHMAT

2022

Hak cipta nasional

## **MODUL PENGGUNAAN APLIKASI IDENTIFIKASI PENYAKIT OSTEOPOROSIS DENGAN METODE ELM**

ROMI FADILLAH RAHMAT

2022

Hak cipta nasional

## **MODUL PENGGUNA USER MANUAL APLIKASI KANKER MELANOMA DENGAN METODE CNN**

ROMI FADILLAH RAHMAT

2022

Hak cipta nasional

## **MODUL PENGGUNA KLASIFIKASI LAHAN SAWAH DENGAN METODE KNN (K-NEAREST NEIGHBOUR)**

ROMI FADILLAH RAHMAT

2022

Hak cipta nasional

## **MODUL KLASIFIKASI CITRA PARU-PARU BRONKITIS DAN TBC DENGAN EXTREME LEARNING MACHINE**

ROMI FADILLAH RAHMAT

2021

Hak cipta nasional

## **Modul Pembelajaran Digital Kearifan Lokal**

MUHAMMAD ANGGIA MUCHTAR , ROMI FADILLAH RAHMAT , MURYANTO AMIN , ALWI DAHLAN RITONGA , MUHAMMAD YUSUF , BAMBANG RIYANTO LIES S

2021

Hak cipta nasional

## **Modul Pembelajaran Digital Multikulturalisme**

MUHAMMAD YUSUF , MUHAMMAD ANGGIA MUCHTAR , ROMI FADILLAH RAHMAT , BAMBANG RIYANTO LIES S , ALWI DAHLAN RITONGA , MURYANTO AMIN

2021

Hak cipta nasional

## **Modul Digital Wawasan Kebangsaan**

MUHAMMAD YUSUF , MURYANTO AMIN , MUHAMMAD ANGGIA MUCHTAR , ROMI FADILLAH RAHMAT , BAMBANG RIYANTO LIES S , ALWI DAHLAN RITONGA

2021

Hak cipta nasional

## **Modul Pembelajaran Digital Radikalisme**

ALWI DAHLAN RITONGA , ROMI FADILLAH RAHMAT , MUHAMMAD YUSUF , MUHAMMAD ANGGIA MUCHTAR , BAMBANG RIYANTO LIES S , MURYANTO AMIN

2021

Hak cipta nasional

## **Aplikasi Pengenalan Pakaian Adat Sumatera Utara Menggunakan Augmented Reality**

MOHAMMAD FADLY SYAH PUTRA , ROMI FADILLAH RAHMAT

2021

Hak cipta nasional

## **Pemanfaatan Augmented Reality Untuk Menampilkan Bangunan Bersejarah Di Kota Medan**

MOHAMMAD FADLY SYAH PUTRA , ROMI FADILLAH RAHMAT