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*Ulfi Andayani began her academic journey at Universitas Sumatera Utara, where she earned a Diploma III in Computer Science in 2007. Driven to further her knowledge, she pursued and completed her Bachelor's degree in the same field in 2010. Ulfi Andayani currently focuses her research on Artificial Intelligence and Multimedia, enabling her to innovate in visual computing technology continuously.*

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## Publications

2020

Jurnal internasional bereputasi

### **Classification of Zingiber Plants Based on Stomate Microscopic Images Using Probabilistic Neural Network (PNN) Algorithm**

IMAM BAGUS SUMANTRI , ULFI ANDAYANI

2020

Jurnal internasional bereputasi

### **The Implementation of Deep Learning Using Convolutional Neural Network to Classify Based on Stomata Microscopic Image of Curcuma Herbal Plants**

ULFI ANDAYANI , MUHAMMAD ANGGIA MUCHTAR , IMAM BAGUS SUMANTRI

2021

Prosiding seminar internasional

### **Heart Disease Simulation with Mixed Reality Technology**

ULFI ANDAYANI , SRI MELVANI HARDI , MOHAMMAD FADLY SYAH PUTRA

2020

Jurnal internasional bereputasi

### **The Implementation of Deep Learning Using Convolutional Neural Network to Classify Based on Stomata Microscopic Image of Curcuma Herbal Plants**

IMAM BAGUS SUMANTRI , MUHAMMAD ANGGIA MUCHTAR , ULFI ANDAYANI

2017

Prosiding seminar internasional

### **Optimization backpropagation algorithm based on Nguyen-Widrom adaptive weight and adaptive learning rate**

IKHSAN SIREGAR , ULFI ANDAYANI , ERNA BUDHIARTI NABABAN , BAIHAQI SIREGAR , MUHAMMAD ANGGIA MUCHTAR , TIGOR HAMONANGAN NASUTION

2026

Prosiding seminar internasional

### **Montessori Games to Train Children's Cognitive Development Using Augmented Reality**

ULFI ANDAYANI , SYAHRIL EFENDI

2020

Jurnal internasional bereputasi

### **The Implementation of Deep Learning Using Convolutional Neural Network to Classify Based on Stomata Microscopic Image of Curcuma Herbal Plants**

ULFI ANDAYANI , IMAM BAGUS SUMANTRI , MUHAMMAD ANGGIA MUCHTAR

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2026

Prosiding seminar internasional

## **Detection of Referral Inefficiency at First Level Health Facilities in BPJS using Light Gradient Boosting Machine Algorithm**

ULFI ANDAYANI

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2017

Prosiding seminar internasional

## **Power meter monitoring for home appliances based on mobile data communication**

SOEHARWINTO , BAIHAQI SIREGAR , ULFI ANDAYANI , MUHAMMAD FADLAN ARISKA

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## **Researches**

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2017

Biomedik

## **Identifikasi Lokasi Fraktur Pada Citra Digital Tulang Tibia Menggunakan Metode Algoritma Scanline**

ULFI ANDAYANI , MUHAMMAD ANGGIA MUCHTAR

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2022

Penelitian Fundamental

## **Optimasi Association Rule Mining untuk Meningkatkan Penjualan di Industri Ritel**

ZULHAM APANDY HARAHAP , ULFI ANDAYANI , IVO ANDIKA HASUGIAN , DINA NAZRIANI

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2020

Penelitian Dosen Pemula

## **DIGITALISASI MANUSCRIPT BATAK MENGGUNAKAN METODE LEARNING VECTOR QUANTIZATION (LVQ)**

ULFI ANDAYANI , MUHAMMAD ANGGIA MUCHTAR

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2021

Penelitian Dosen Pemula

## **Pelestarian Budaya Bangunan Sejarah Tjong A Fie Medan dalam Virtual Reality**

BAIHAQI SIREGAR , ULFI ANDAYANI

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2024

## **Sistem Predictive Maintenance Berteknologi Edge Artificial Intelligence pada Mesin Motor**

BAIHAQI SIREGAR , ULFI ANDAYANI

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2025

## **Pengenalan Jenis Roasting Biji Kopi Menggunakan Algoritma K-Nearest Neighbors (KNN)**

TIGOR HAMONANGAN NASUTION , LUKMAN ADLIN HARAHAP , ULFI ANDAYANI

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2022

Penelitian Dosen Pemula

## **SUMUT E-Heritage Virtual Tour Rumah Adat Suku Batak Toba dan Batak Simalungun**

ULFI ANDAYANI , IVAN JAYA

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2018

Penelitian Dosen Pemula

## **IDENTIFIKASI PENYAKIT TUBERKULOSIS BERDASARKAN CITRA X-RAY MENGGUNAKAN PROBABILISTIC NEURAL NETWORK (PNN)**

TIGOR HAMONANGAN NASUTION , ULFI ANDAYANI , MUHAMMAD ANGGIA MUCHTAR

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2023

# Custom Application Development Bantuan Sosial Embedded System in Application Kesejahteraan Sosial-Next Generation Desa di Kabupaten Batubara

BAIHAQI SIREGAR , ULFI ANDAYANI

2018

Biomedik

## Identifikasi Penyakit Tuberkulosis Berdasarkan Citra X-Ray Menggunakan Probabilistic Neural Network (Pnn)

ULFI ANDAYANI , MOHAMMAD FADLY SYAH PUTRA

2016

Ipteks Bagi Masyarakat

## Pemanfaatan Algoritma Grey Level Co-Occurance Matrix Dan Jaringan Saraf Tiruan Backpropagation Untuk Klasifikasi Tingkatan Roasting Kopi Spesialti Pada Aplikasi Android

TIGOR HAMONANGAN NASUTION , ULFI ANDAYANI

2022

Penelitian Fundamental

## Optimasi Association Rule Mining untuk Meningkatkan Penjualan di Industri Ritel

ZULHAM APANDY HARAHAHAP , ULFI ANDAYANI

2023

## Prediksi Pertumbuhan dan Identifikasi Penyakit Hortikultura pada Sistem Robotika Pengendali Budidaya Tanaman (Tahun II)

BAIHAQI SIREGAR , ULFI ANDAYANI

## Community Services

2016

Ipteks

## Penerapan Teknologi Sensor Untuk Pelatihan Pembelajaran Stem Pada Siswa Sekolah Kejuruan

BAIHAQI SIREGAR , ULFI ANDAYANI , FAHMI

2015

Ipteks

## Optimalisasi E-learning dalam Proses Pembelajaran Sekolah

SARAH PURNAMAWATI , ULFI ANDAYANI , MOHAMMAD FADLY SYAH PUTRA

2017

Ipteks Bagi Inovasi Kreativitas Kampus

## IbKIK Penginderaan Vegetasi Hasil Data Citra Ortophotos Menggunakan Uav

SAWALUDDIN , ULFI ANDAYANI , FAHMI

2019

Penelitian Hibah Bersaing

## Pemanfaatan Teknologi Augmented Reality Berbasis Android untuk Pembelajaran Siswa Menengah Kejuruan

ULFI ANDAYANI , MOHAMMAD FADLY SYAH PUTRA , FADLI

2018

Ipteks Bagi Kewirausahaan

## Produk Komersil Hasil Industri Kreatif Berbasis Desain 3d

SAWALUDDIN , ULFI ANDAYANI , FAHMI

2021

Ipteks Bagi Masyarakat

## Program Positive Education untuk Meningkatkan School Well-being

NELVITA , ULFI ANDAYANI , IVO ANDIKA HASUGIAN , DINA NAZRIANI , EMBUN SUCI NASUTION

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2017

Hak cipta nasional

## **Program Komputer : Virtual Tour Mansion Tjong A Fie Dengan Gamification Sebagai Media Pembelajaran Sejarah**

ULFI ANDAYANI , MOHAMMAD FADLY SYAH PUTRA

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2017

Hak cipta nasional

## **Pemodelan Dan Animasi 3d Interaktif Berbasis Mixed Reality Untuk Pengenalan Sejarah Sultan Dan Peninggalan Kesultanan Deli Di Istana Maimun**

ULFI ANDAYANI , MOHAMMAD FADLY SYAH PUTRA

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2017

Hak cipta nasional

## **User Manual : Virtual Tour Mansion Tjong A Fie Dengan Gamification Sebagai Media Pembelajaran Sejarah**

MOHAMMAD FADLY SYAH PUTRA , ULFI ANDAYANI

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