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*Desilia Selvida completed her Bachelor's and Master's degrees in Computer Science at Universitas Sumatera Utara, graduating in 2012 and 2019. Her research focuses on Machine Learning, where she develops techniques and applications for automated data analysis.*

## Publications

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2026

Prosiding seminar internasional

### **Anomaly Detection and Prediction HIV using Local Outlier Factor and XGBoost**

ANNISA FADHILLAH PULUNGAN , DESILIA SELVIDA , AGNES IRENE SILITONGA

2025

Prosiding seminar internasional

### **Implementation of The KNN Algorithm for Classification Population Density Levels Based Satellite Imagery**

FUZY YUSTIKA MANIK , DESILIA SELVIDA , SUCI RAMADANI

2025

Jurnal nasional terakreditasi

### **PKM DIGITALISASI SISTEM PRESENSI SISWA MELALUI APLIKASI DI MADRASAH ALIYAH SUNGGAL DESA TANJUNG GUSTA KEC SUNGGAL KAB DELI SERDANG SUMATERA UTARA**

VIRDYRA TASRIL , PURWA HASAN PUTRA , ARIF RIDHO LUBIS , JULHAM , MAYANG MUGHNYANTI , DESILIA SELVIDA

2025

Prosiding seminar internasional

### **Analysis Classification Imbalanced Data Predection Multiclass in Machine Learning: Oversampling with SMOTE and ADASYN**

SANTI PRAYUDANI , PURWA HASAN PUTRA , YUYUN YUSNIDA LASE , ARIF RIDHO LUBIS , DESILIA SELVIDA

2025

Prosiding seminar internasional

### **Instant Messaging Security Using Affine Cipher and RSA CRT Algorithm**

DIAN RACHMAWATI , DESILIA SELVIDA

2025

Jurnal nasional terakreditasi

### **Application of Apriori Algorithm in Data Mining to Find Consumer Purchasing Patterns in Supermarkets**

DESILIA SELVIDA , PURWA HASAN PUTRA , MUHAMMAD SYAHPUTRA NOVELAN

2025

Jurnal internasional bereputasi

### **OPTIMIZATION OF GARLIC CULTIVATION LAND SELECTION USING PCA AND K-MEANS APPROACH IN SPATIAL INTELLIGENT SYSTEM**

DESILIA SELVIDA , ANNISA FADHILLAH PULUNGAN , ADE SARAH HUZAIFAH

2024  
Jurnal nasional terakreditasi

## **Penerapan Aplikasi Pintar Tani Untuk Peningkatan Pemasaran Pertanian Pada Eco Farm di Desa Kelambir V**

AZANUDDIN , PURWA HASAN PUTRA , JULHAM , ARIF RIDHO LUBIS , DESILIA SELVIDA

2024  
Jurnal nasional terakreditasi

## **Kinerja Potokol Routing AODV dan DSDV pada Topologi Grid di Wireless Sensor Network (WSN)**

DESILIA SELVIDA , ADE SARAH HUZAIFAH , R. A. FATTAH ADRIANSYAH

2024  
Prosiding seminar internasional

## **Machine learning vegetable pesticide identification based on color image using k-nearest neighbor method (KNN)**

PURWA HASAN PUTRA , DESILIA SELVIDA , ANNISA FADHILLAH PULUNGAN

2024  
Prosiding seminar internasional

## **Classification of tomato leaf disease based on leaf image using convolutional neural network algorithm**

ANNISA FADHILLAH PULUNGAN , DESILIA SELVIDA , ADE SARAH HUZAIFAH

2024  
Prosiding seminar internasional

## **Combination of ADASYN and Random Forest for Classification of Imbalanced Lung Cancer Dataset**

DESILIA SELVIDA , AGNES IRENE SILITONGA , ANNISA FADHILLAH PULUNGAN

2024  
Prosiding seminar internasional

## **Comparison of Steepest Ascent Hill Climbing Algorithm and Genetic Algorithm in Finding Billing Collector Path (ACC Medan)**

DESILIA SELVIDA , DIAN RACHMAWATI

2024  
Buku referensi

## **Computer Vision**

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2024  
Book chapter nasional

## **Computer Vision**

PURWA HASAN PUTRA , ANNAHL RIADI , SEMMY WELLEM TAJU , DESILIA SELVIDA , HERU SAPUTRA , HARRY YULIANSYAH , RISMAYANI , PUJIANI WAHYUNINGSIH

2023  
Buku lainnya

## **Optimization of cross-validation testing on the decision tree and k-nearest neighbor in classifying election data**

DESILIA SELVIDA , PURWA HASAN PUTRA

2023  
Jurnal nasional terakreditasi

## **Pelatihan Penggunaan Aplikasi Komputer Akuntansi Untuk Guru dan Siswa SMK Ar-Rahman Medan**

DESILIA SELVIDA , MALINDA SARI SEMBIRING , VICKY ROSALIA , FAUZIAH KUMALASARI

2022  
Jurnal nasional terakreditasi

## **Pemanfaatan Penggunaan Aplikasi Elearning Dalam Pembelajaran Daring Pada IAKN Tarutung**

MALINDA SARI SEMBIRING , DESILIA SELVIDA

2021  
Jurnal nasional terakreditasi

# ANALYSIS ALGORITHM APRIORI IN MEDICAL DEVICE SUPPLY PLANNING

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2026  
Artikel ilmiah

## Penyediaan Informasi Interaktif Program Studi Ilmu Komputer Usu Berbasis Chatbot dengan Platform Rasa

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## Researches

2024  
Penelitian Dana Lokal Perguruan Tinggi

### PENERAPAN SMART FARMING UNTUK MENINGKATKAN SWASEMBADA PANGAN DENGAN TEKNOLOGI IOT DAN MACHINE LEARNING DI DESA BANYUMAS KAB LANGKAT

JUWITA AGUSTRISNA , DESILIA SELVIDA , ANNISA FADHILLAH PULUNGAN

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Penelitian Dana Lokal Perguruan Tinggi

### PENERAPAN SMART FARMING UNTUK MENINGKATKAN SWASEMBADA PANGAN DENGAN TEKNOLOGI IOT DAN MACHINE LEARNING DI DESA BANYUMAS KAB LANGKAT

JUWITA AGUSTRISNA , DESILIA SELVIDA , ANNISA FADHILLAH PULUNGAN

2023  
Penelitian Dana Lokal Perguruan Tinggi

### INOVASI SMART SISTEM SPASIAL LAHAN DATARAN TINGGI BUDIDAYA BAWANG PUTIH TERHADAP HASIL PANEN MENGGUNAKAN PENDEKATAN MACHINE LEARNING

ADE SARAH HUZAIFAH , DESILIA SELVIDA , ANNISA FADHILLAH PULUNGAN

2022  
Penelitian Dosen Pemula

### Klasifikasi Penyakit Tomat Berdasarkan Citra Daun Menggunakan Algoritma Convolutional Neural Network

ADE SARAH HUZAIFAH , DESILIA SELVIDA , ANNISA FADHILLAH PULUNGAN , IRWANSYAH SARUMAHA , INDAH AMALIA SIREGAR , MUHAMMAD RIZKY SATRIA NASUTION

## Community Services

2024  
**PERTUKARAN MAHASISWA MERDEKA**

DESILIA SELVIDA , MAHATIR MUHAMMAD

2021  
Ipteks Bagi Masyarakat

### PELATIHAN PENGGUNAAN APLIKASI KOMPUTER AKUNTANSI UNTUK GURU DAN SISWA SMK AR-RAHMAN MEDAN

DESILIA SELVIDA , FAUZIAH KUMALASARI , MALINDA SARI SEMBIRING , VICKY ROSALIA , GHAFIRA HUSNA WIJAYA , VANYA TANIA , MARIA TAMBUNAN , TANIA MARGARETTA NAULI S , ANDIRA SHALSABILLA

2021  
Penelitian Dosen Pemula

### Pembuatan dan Pemanfaatan aplikasi e-learning dalam media pembelajaran daring pada Institut Agama Kristen Negeri (IAKN) Tarutung

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