Farel Rakha Dzakwan

profesionalfarelrakhad@gmail.com | +6282143066677 | www.linkedin.com/in/farel-rakha-dzakwan

EDUCATION

University of Brawijaya | Informatics Engineering | GPA: 3.71/4.00 ***Aug 2022 - Present***

Area of Interest: Artificial Intelligence, Data Analyst, Machine Learning, Data Management

Relevant Courses: Artificial Intelligence, Deep Learning, Natural Language Processing, Artificial Neural Network, Text Mining

EXPERIENCE

Organizer | Statistika Ria dan Festival Sains Data ***Aug 2023 - Aug 2023***

- Managed logistics for workshops and competitions with 100+ participants, ensuring smooth communication and timely distribution of materials.
- Delivered a seamless experience across organized events by implementing detailed run-of-show timelines, fostering an environment appreciated by speakers who rated satisfaction at an average score of 9 out of 10.

Organizer | Asosiasi Pendidikan Tinggi Informatika dan Komputer ***Aug 2023 - Aug 2023***

- Managed registration and technical preparations for 200+ participants and 5 speakers, ensuring flawless execution within the planned schedule.
- Facilitated a professional conference for 200+ attendees and 5 speakers, enhancing engagement through structured processes.

ORGANIZATION

Advocacy and Student Prosperity | Eksekutif Mahasiswa Informatika (EMIF) ***Oct 2022 - Feb 2023***

- Researched and disseminated academic and scholarship information through social media platforms such as Instagram and LINE OA, sharing 20+ scholarship opportunities and academic updates to increase student awareness.
- Provided advocacy and support to 10+ students in handling academic challenges, including tuition fee remission, course selection, and effective communication with lecturers, fostering a more supportive academic environment.

PROJECT

Comparative Evaluation of CNN Algorithm Performance and RNN for Toxic Comments Classification

Deep Learning Course's Final Project ***Aug 2024 - Dec 2024***

- Conducted multi-label classification on a toxic comments dataset by comparing CNN and LSTM-based RNN architectures, achieving a ROC AUC score of 0.9671 for CNN and 0.9578 for RNN.
- Demonstrated CNN's 1% higher ROC AUC compared to RNN, highlighting its strengths in recognizing local patterns and faster training time, while RNN excelled in understanding sequential contexts in long comments.

Sentiment Analysis of Financial News using SVM Machine Learning Algorithm

Natural Language Processing Course's Final Project ***Aug 2024 - Dec 2024***

- Developed a sentiment classification pipeline using SVM with varying preprocessing scenarios: stopwords removal and lemmatization, achieving accuracies of 71.58% (Scenario I), 73.63% (Scenario II), and 73% (Scenario III).
- Analyzed preprocessing techniques to enhance model performance; identified dataset imbalances that resulted in a significant 20% increase in precision and recall for neutral sentiment, optimizing overall model accuracy.

Loan Approval Classification Using Artificial Neural Networks (ANN)

Artificial Neural Network Course's Final Project ***Aug 2024 - Dec 2024***

- Developed a predictive model using Backpropagation in ANN to classify loan approval status, leveraging a dataset from Kaggle with 45,000 rows and 14 features, including income, loan amount, and credit history.
- Achieved high performance in binary classification with reported metrics from prior studies: accuracy of 94.37%, sensitivity of 78.57%, specificity of 98.25%, and F1-Score of 84.62%.

Clustering Brawijaya University Journal Data Using Improved K-Means Algorithm

Text Mining Course's Final Project ***Aug 2023 - Dec 2023***

- Applied an enhanced K-Means clustering algorithm to classify 7389 journal articles based on abstract similarities, optimizing cluster quality with a silhouette score of 0.5078 using 250 terms and three clusters.
- Performed feature extraction and evaluated clusters with visualization tools such as PCA and dendrograms, revealing two main topics: social/practical research development and health research development.

CERTIFICATION

- **Belajar Dasar Visualisasi Data |** Dicoding ***Oct 2024***
- **Memulai Pemrograman dengan Python |** Dicoding ***Oct 2024***

SKILLS

Python Programming Language | TensorFlow Machine Learning Library | Data Processing | Data Visualization | Machine Learning Techniques | Evaluation Metrics | Google Colab | GitHub | Spreadsheet