Mgs M Luthfi Ramadhan

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EXECUTIVE SUMMARY

A **machine learning and deep learning practitioner** with four years of experience. A result-driven professional who specializes in pattern recognition, machine learning, and deep learning. Excellent at implementing algorithms in programming languages.

SKILLS

- **Programming (Mostly Python)**
- **Machine Learning**
- **Deep Learning**
- **Pattern Recognition**
- **Computer Vision**
- **Writing**

EXPERIENCE

Universitas Indonesia (UI)
November 2021 – Present
One of the leading research universities or academic institutions in the world that continues to pursue the highest achievements in terms of discovery, development, and knowledge diffusion regionally and globally. With the achievements it continues to achieve, UI is ranked as the best campus in Indonesia based on an assessment by a world ranking agency.

Research Assistant
Assists research related to artificial intelligence (AI).

- **Deep Learning:** Develops deep learning models to solve pattern recognition problems such as CNN, LSTM, Siamese neural network, U-Net, etc.
- **Pattern Recognition:** Did classification on echocardiography videos using deep learning and achieved an F1 score that range from 91% to 94%. Did left ventricle segmentation on echocardiography image using deep learning and achieved a dice coefficient of 92%. Did classification on LiDAR data using deep learning and achieved an F1 score of 79%.
- **Research:** Assists research related to artificial intelligence (AI) in the Intelligent Robots and Systems (IRoS) laboratory at the Department of Computer Science Universitas Indonesia.
- **Programming:** Implements machine learning and deep learning algorithms using Python programming language. It mostly relies on libraries such as Tensorflow, Sklearn, Numpy, and OpenCV. Develops desktop application using Python programming language to classify heart failure using deep learning model based on echocardiography video.

Lecturer Assistant
Assists the lecturer in delivering the lecture.

- **Deep Learning:** Assists the lecturer to lecture advanced machine learning classes at the Department of Computer Science Universitas Indonesia. Gives constructive criticism to students on their final projects in advanced machine learning classes.
- **Research:** Assists the lecturer to lecture research methodology classes at the Department of Computer Science Universitas Indonesia. Preparing material on the Scele

(Universitas Indonesia's E-learning) such as videos, pdf, and assignments. Gives constructive criticism to students on their final projects in research methodology classes.

Medium

October 2020 – December 2021

An online publishing platform with roughly 175.000 writers publishing online across the world.

Writer

Writes articles about data science for several publications such as Towards Data Science and Towards AI.

- **Writing:** Writes 14 articles with "Simplified" as a niche to make data science easier to understand for beginners.
- **Deep Learning:** Writes articles about one of the most important fundamentals of deep learning that most people miss, such as dying ReLU, symmetry problems, etc.

PT. Pelabuhan Indonesia II (Persero) (Internship)

Dec 2018 – Jan 2019

An industry that operates in the field of maritime transportation.

Software Engineer

Develop a desktop application to monitor docked ships.

- **Programming:** Develop a desktop application to monitor docked ships on the dockyard using Java. The application takes input such as the ship's identity, its arrival position and time, its department schedule, its length, etc.
- **SQL:** Create a database that stores information about docked ship in the dockyard. Automate the removal of the docked ships from the database using SQL events based on its department schedule.

EDUCATION

Master of Computer Science

- University: Universitas Indonesia (Depok, Indonesia)
- GPA: 3.80
- Date: August 2020 - July 2022

Bachelor of Computer Science

- University: Universitas Sriwijaya (Palembang, Indonesia)
- GPA: 3.38
- Date: August 2016 - March 2020

Exchange Student

- University: Universiti Teknologi Malaysia (Johor Bahru, Malaysia)
- Date: June 2019 - August 2019

Additional Professional Development:

- Calculus 3 (multivariable calculus), part 1 of 2 (UC-c730f4f4-5850-4b2c-87c6-04cec720ffea) – Udemy (2021)

- Calculus 3 (multivariable calculus), part 2 of 2
  ([UC-c224598b-a0ca-4dd8-b630-c1edd6a54cdb](UC-c224598b-a0ca-4dd8-b630-c1edd6a54cdb)) – Udemy (2021)
- HTML, CSS & Javascript (0447977081-17/OA.DTS/BLSDM.KOMINFO/2020) – Digital Talent Scholarship (2020)

PUBLICATION

- [Time-Distributed Vision Transformer Stacked With Transformer for Heart Failure Detection Based on Echocardiography Video](#) - IEEE Access (2024)
- [Building Damage Assessment Using Feature Concatenated Siamese Neural Network](#) - IEEE Access (2024)
- [An alternative for kernel SVM when stacked with a neural network](#) - Jurnal Ilmu Komputer dan Informasi (2024)
- [Improving Remote Sensing Change Detection Via Locality Induction on Feed-forward Vision Transformer](#) - Jurnal Ilmu Komputer dan Informasi (2024)
- [Enhancing Assault Maneuvers in Simulated Scenarios of Multiple Invader Kamikaze Drones through the Utilization of a Modified Adaptive Elforce Algorithm](#) - Jurnal Ilmu Komputer dan Informasi (2024)
- [Change Detection of High-resolution Remote Sensing Images Through Adaptive Focal Modulation on Hierarchical Feature Maps](#) - IEEE Access (2023)
- [Encoder-Decoder with Atrous Spatial Pyramid Pooling for Left Ventricle Segmentation in Echocardiography](#) - Jurnal Ilmu Komputer dan Informasi (2023)
- [Modified MultiResUNet for Left Ventricle Segmentation from Echocardiographic Images](#) - 2022 7th International Workshop on Big Data and Information Security (IWBIS).
- [Learning Intelligent for Effective Sonography (LIFES) Model for Rapid Diagnosis of Heart Failure in Echocardiography](#) - Acta Medica Indonesiana (2022)
- [Collapsed Building Detection Using Residual Siamese Neural Network On LiDAR Data](#) - 2021 6th International Workshop on Big Data and Information Security (IWBIS)

RELEVANT PROJECTS

Intuition: Chief editor of [Intuition](#). A publication based on Medium that provides a platform for beginners up to experienced writers in the field of science. (February 2021 - Present)
Front-end Developer: Implementing user interface (UI) using Cascading Style Sheets (CSS). (March 2020 - November 2020)

VOLUNTEERISM

Python Library: Implements 9 machine learning and natural language processing (NLP) algorithms from scratch in Python. These [libraries](#) are dedicated to help my colleagues to finish their undergraduate thesis code since the codes in these libraries are easier to understand and don't have dependencies other than NumPy and Pandas.

OTHER RELEVANT INFORMATION

Additional Languages: Bahasa Indonesia (Native), English (Intermediate)

Technical Skills: Python, Tensorflow, Excel, MS Word, FL Studio.

Awards: [Presenter at the 6th International Workshop on Big Data and Information Security (2021)](#)