

Muhammad Ihsan

☎ 082210346035  github.com/emhaihsan  linkedin.com/in/emhaihsan ✉ emhihsan@gmail.com

PROJECTS

- Colorectal Cancer Segmentation** | *Indonesia AI Bootcamp Final Project* November 2023
- Perform multi-class semantic segmentation on colorectal cancer data.
 - Implementing the development of the U-Net architecture, namely residual and attention U-Net.
 - Developing research that has been carried out in the original paper.
- Street Segmentation** | *Indonesia AI Bootcamp Project 3* August 2023
- Performed segmentation using a portion of the Cityscapes dataset consisting of 367 training images and 101 for validation.
 - Created 3 Fully Convolutional Network (FCN-32, FCN-16, FCN-8) models and 1 U-Net model.
 - Compared the segmentation results of the 4 models created.
- Person Detection** | *Indonesia AI Bootcamp Project 2* July 2023
- Trained 2 object detection models (Faster R-CNN and YOLOv5).
 - Used 3500 annotated person data from the COCO dataset.
 - Displayed 1 example prediction result from each model.

EDUCATION

- Universitas Gadjah Mada** August 2021 - April 2024
Master of Computer Science
- Universitas Nusa Mandiri** September 2019 - March 2021
Bachelor of Computer Engineering

RELEVANT COURSEWORK

Computational Intelligence and Machine Learning

Learned the fundamentals of artificial intelligence and its applications. Explored algorithms such as GA, Swarm Intelligence, PSO, SVM, ANN, and Deep Learning. Worked on projects using genetic algorithms and logistic regression.

Digital Image Processing and Analysis

Studied the basic concepts of digital image processing. Explored color space concepts and pixel relationships. Implemented image quality enhancement methods. Applied segmentation and morphological processes. Explained the process of image feature extraction, representation, and interpretation. Wrote reports on the issues and implementation of digital image processing techniques in the real world.

CAMPUS ACTIVITIES

- Treasurer** | *Association of Master's Program in Computer Science Students (HIMPASIKOM) UGM* February 2022 - March 2023
- Recorded and managed the finances of HIMPASIKOM for the 2022-2023 period.
 - Organized the Gathering of MKOM 2022 Students and a Sharing Session with Outstanding Students.
 - Headed the Organizing Committee for the MKOM Family Gathering and Ramadan Discussion in 2023.
 - Created 2 example tutorial articles on the blog learn.himpasikom.id.

SKILLS

Programming Languages: Python

Library: Tensorflow

CERTIFICATIONS

- Computer Vision Specialist** | *Indonesia AI* 2023
Learn the basics of machine learning to its application to computer vision. Created 3 projects related to image classification, object detection, and semantic segmentation. The final project carried out was multi-class semantic segmentation for colon cancer data.
- Machine Learning** | *deeplearning.ai & Stanford University* 2023
Created Machine Learning models using Scikit-Learn for linear regression prediction and logistic regression classification. Trained neural network models for multi-class classification using TensorFlow. Explored recommendation system and reinforcement learning methods.
- Tensorflow Developer** | *deeplearning.ai* 2022
Learned the use of TensorFlow to train neural network models. Studied the application of TensorFlow to text and image data. Explored strategies like augmentation and dropout to prevent overfitting.