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Arief Ramadhan

AI / Machine Learning Engineer

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I am a visionary engineer with a master's degree in Robotics. I currently work at Nodeflux as an Artificial Intelligence (AI) Engineer and MindHope.id as the Co-founder/Engineer. I mentor AI interns and speak at AI-related events occasionally. My goal is to become an AI expert through research and development.

Education

Master of Science in Robotics, *Univeristy of Bristol* 2018-2020
Graduated with Merit

Bachelor of Science in Mechanical Engineering, *Institut Teknologi Bandung* 2013-2017
Cumulative GPA: 3.16/4.0

Skills

Programming Languages	Python, SQL , MarkDown
Tools	Git, Linux, Docker, Azure Form Recognizer
Frameworks	Tensorflow, Keras, Pytorch, Paddlepaddle
Quantitative Research	Image Processing, Computer Vision, Optical Character Recognition, Object Detection, Image Segmentation, AI Model Optimization
Communication	English (Professional), Bahasa Indonesia (Native)

Professional Experience

Artificial Intelligence Engineer **Jan 2021 — Present**
Nodeflux *Jakarta, Indonesia*

- Create OCR Pipelines for multiple documents that have received > 450 thousands hit
- Achieve OCR accuracy of >95% for ID Card (KTP), Driver's License (SIM), and Tax Card (NPWP)
- Build and train text detector, text recognizer, and segmentation model
- Research on Image Quality Assessment

Co-Founder/Engineer **Jun 2021 — Present**
MindHope.id *Jakarta, Indonesia*

- Develop business model, customer avatar, and conduct competitor analysis
- Create timeline, Standard Operational Procedure of research process, and research proposal
- Design product requirements
- Build a chatbot using Python and Rasa framework
- Deploy a chatbot using Google Cloud Platform's Virtual Machine

Artificial Intelligence Engineer **Jun 2020 — Sep 2020**
Telkom Indonesia *Jakarta, Indonesia*

- Work in data science team in a B2B E-Commerce project
- Learn and create a concept of recommendation engine
- Maintain and handle data using SQL
- Volunteer as a data collector of Covid-19 cases in Indonesia

Leadership Experience

AI Mentor, *Nodeflux* 2022
Computer Vision Unit Leader, *Supertype.AI* 2020
Head of Logistic Division, *Himpunan Mahasiswa Mesin* 2015

Speaking Engagements

Judge Panel: Compfest AI Innovation Challenge, *University of Indonesia* 2022
Speaker: How AI plays a Role in Our Lives Now and the Future, *Universitas Buya Hamka* 2021
Speaker: What Makes AI Essential in Our Future, *ESQ Business School* 2021
Speaker: Sound Source Localization, *Jakarta Machine Learning* 2020

Projects

Optical Character Recognition for ID Card, Driver's License, and Tax Card — **Jan 2021 — Present**
Nodeflux — *Jakarta, Indonesia*

- Create OCR Pipelines using PaddleOCR and Azure Form Recognizer.
- Build and train text detector, text recognizer, and semantic segmentation model.
- Create synthetic data, check data quality and label consistency using Fiftyone.
- Use MLFlow for training reproducibility.

Histopathologic Cancer Detection — **Mar 2020 — Apr 2020**
Personal — *Jakarta, Indonesia*

- Final project for Udacity Machine Learning Engineer Nanodegree
- Build a Neural Network that detects tumors in medical scan images
- Transfer learning using the VGG-16 Imagenet model

A Comparison of Neural Network Performance for Sound Source Localization — **Jan 2019 — Aug 2019**
Master's Thesis — *Bristol, UK*

- Design a binaural robot head using Solidworks
- Assemble the robot consisted of 3D printed part, servo motor, and microphone
- Collect and preprocess audio data using the assembled robot
- Compare several Neural Network models to classify sound angle relative to the robot

Course Certifications

Hydranets: Monstrous Multi-Task Learning Techniques with PyTorch, *Think Autonomous* 2022
Neural Optimization: Elite Tactics to Build Production-Ready Algorithms with PyTorch, *Think Autonomous* 2022
Computer Vision Engineer Nanodegree, *Udacity* 2020
Machine Learning Engineer Nanodegree, *Udacity* 2020
Deep Learning Specialization, *Coursera* 2019

Achievements

3rd Place Facebook Developer Circle London Hackathon, *London, UK* 2019
8th Place Warstek Science Writing Competition, *Indonesia* 2018
Out of 150+ Participants
2nd Place MX Magazine Writing Competition, *Indonesia* 2017
Article featured in the Mechanical Engineering Student's Magazine