

# AJI SETYOKO

MASTER DEGREE CANDIDATE AT NATIONAL TAIWAN UNIVERSITY OF SCIENCE AND TECHNOLOGY



## CAREER OBJECTIVE

Seeking challenging works with a progressive organization that provides an opportunity to capitalize on my technical skills & abilities in the field of Deep Learning on Computer Vision, Data Engineering, and Cloud Computing.



## CONTACT & ADDRESS

No. 43號, Section 4, Keelung Rd, Da'an District, Taipei City, 106  
 INDONESIA  
 +886-9023-2074-8 / +62 813-1770-1032  
 aji.setyoko@gmail.com  
 <https://ajisetyoko.github.io/>

## PROJECT AND ACHIEVEMENTS

### PROFESSIONAL CERTIFICATION



#### TensorFlow Developer Certificate

May 6, 2020 - May 6, 2023 | ID 17749187 | TensorFlow | Google Developer Certification

### PRE-PROFESSIONAL EXPERIENCE

- GRADUATE RESEARCHER** | Big Data Laboratory | Fall 2018 - Present
  - As a programmer on deep learning and machine learning.
  - Developing a new algorithm in the computer vision area.
  - Employs an existing state of the art of computer vision algorithm in real-world problems (related to industrial problems which comes from Taiwanese company).
  - Example project: safety systems and recommendation systems on labor workers based on computer vision.
  - Employer**: Departments of Computer Science and Information Engineering, National Taiwan University of Science and Technology.
- DEVELOPER TEAM** | Android Internship | Summer 2017
  - As a full-stack developer to build an Android application for students course system and security features.
  - The roles are a back-end programmer, a front-end programmer, and a UI/UX designer.
  - This is a team project in which everyone was rolling to another position randomly every feature requests.
  - Employer**: Center of Computer Science Universitas Indonesia (PUSILKOM UI).
- RESEARCHER INTERN** | Control Department on Rocket Technology Center Indonesia | Winter 2016
  - As a control systems designer by simulation.
  - Make a rocket control systems and a rocket mathematic models based on simulation.
  - Employer**: National Institute of Aeronautics and Space (LAPAN) Indonesia.
- LABORATORIUM ASSISTANT** | Lecturer Team Research | Summer 2015
  - Electric inverter research team under Professor supervision.
  - Research to build an effective Inverter, focus as an electrical schematic engineer.
  - Employer**: Motor Control Laboratory in Department of Electrical Engineering Universitas Indonesia.

### PUBLICATION

- Pairwise Adjacency Matrix On Spatial Temporal Graph Convolution Network for Skeleton-based Two-Person Interaction Recognition** | 2020 | Image Processing (ICIP) 2020 27th IEEE International Conference.
- Development of a Backpropagation Based Neural Network Control System for Following Rocket Trajectory in a Hovering Manuever** | 2018 | Undergraduate Thesis - Universitas Indonesia Library.

### ACHIEVEMENT

- INDONESIA NATIONAL LINE FOLLOWER ROBOTIC COMPETITION** | 2012
  - First Winner, Universitas Indonesia.

### COURSE CERTIFICATION



#### TensorFlow in Practice Specialization

May 5, 2020 - No Exp. | ID SDAJP36MUDL4 | deeplearning.ai | Coursera



#### Advanced Machine Learning with TensorFlow on Google Cloud Platform Specialization

May 9, 2020 - No Exp. | ID 4YFNQEQ74C6Q | Google Cloud | Coursera

# EDUCATION

## • MASTER OF SCIENCE ON COMPUTER SCIENCE AND INFORMATION ENGINEERING | 2018 - Present

- *Research area : Computer Vision and Big Data , GPA : 4.2/4.3*
- National Taiwan University of Science and Technology, Taipei, Taiwan.

## • BACHELOR OF ENGINEERING IN ELECTRICAL ENGINEERING | 2014 - 2018

- *Major on Control Systems and Minor on Telecommunications, GPA : 3.5/4.0*
- Universitas Indonesia, Depok, Indonesia.

# EXPERIENCE

## PORTOFOLIO

### • TWO PERSON INTERACTION RECOGNITION and CGU\_PROJECT [Thesis and Laboratory Project] - Present

- *Building a novel algorithm to detect a two-person interaction (action) from a video (real-time or file-based).*
- *As a lead and a main programmer to industrialize existing methods on action recognition models.*
- *In terms of laboratory projects, the works are building recommendation systems and safety systems for labor workers.*
- **Keywords :** Action Recognition, Graph Convolutional Network, Skeleton Detection, Docker, AWS Cloud Computing

### • HIGHWAY CAR COUNTER VIDEO BASED [Course Project] - 2019

- *Built a new algorithm by combining object detection and object tracker as an object counter.*
- *Apply the model to real-time video or file based video as an occurrence counter (human counter, animal counter, and or others detection).*
- **Keywords :** Object Detection, Object Tracking, YOLO, Neural Network, Real-time Object Detection

### • SUPER RESOLUTION ON ANDROID PHONE [Advanced Course Project] - 2019

- *Deployed a super-resolution algorithm on a Qualcomm chipset based android smartphone.*
- *Re-code and re-train an existing code to be able to run by the supported libraries.*
- *Use a SNPE library to fully maximize the GPU support unit on a smartphone.*
- **Keywords :** Android Smartphone, Qualcomm Chipset, SNPE Library, Generative Adversarial Network

### • CUTTING AND PRINTING OPTIMIZATION [Course Project] - 2019

- *Built a model to find the most effective way to do cutting and printing problems such as fabric cutting solutions.*
- *Used Genetic Algorithm and Particle Swarm as base models.*
- *The example result is maximizing the cut result of a fabric cutting layer by minimizing the wasted part on the fabric layer.*
- **Keywords :** Metaheuristic, Optimization, Genetic Algorithm, Particle Swarm

### • LEARNING ENGLISH WITH CHATBOT [Self-Learning] - 2018

- *Built a Natural Language Processing (NLP) system to generate English language problems and the probability answers automatically.*
- *Employed an NLTK library in Python and deployed as a chatbot by using a common chatting application, LINE.*
- **Keywords :** Line Chatbot, Heroku, NLP, NLTK, Python Flask

### • MYUI ANDROID APPLICATION [Internship Project] - 2017

- *Built an android application to assist students in homework and task.*
- *The main rule was becoming a JAVA programmer.*
- *The job desks are covering from back-end programming, front-end programming, and UI/UX designing.*
- **Keywords :** Android Studio, JAVA, AGILE Software Developments, Google Firebase

# ORGANIZATION & MEMBERSHIP

### • ADMINISTRATOR OF PURWOREJO'S COLLEGE STUDENT COMMUNITY OF UNIVERSITAS INDONESIA | 2016 - 2017

### • PROJECT OFFICER OF WELCOMING NEW COLLEGE STUDENT OF UNIVERSITAS INDONESIA | 2015

### • MEMBER OF NATURE COMMUNITY "KAMUKA PARWATA" FACULTY OF ENGINEERING UNIVERSITAS INDONESIA | 2014 - Present

# TECHNICAL SKILLS

- |                       |  |   |
|-----------------------|--|---|
| • Python              | • TensorFlow, PyTorch, and Caffe2                          | • Cloud Computing : AWS EC2 and Machine Learning on Google Cloud Platform |
| • C/C++               | • Scikit-learn and Pandas                                  | • Web Developments : HTML and CSS   |
| • Matlab and Simulink | • Hadoop, Spark, and Apache Beam                           | • Agile and DevOps : AGILE Certificate                                    |
| • JAVA and Kotlin     | • IOT Developments : Arduino, Raspberry, and NVIDIA Jetson | • CST Studio, Proteus Studio, and PSIM                                    |
| • Bash Scripting      |  |   |

# ADDITIONAL INFORMATION S

## Languages :

- English,
- Bahasa (Indonesian),
- Mandarin,
- Javanese.

## References :

- **Master Advisor : Kai-Lung Hua**, Vice Dean in College Electrical Engineering and Computer Science at National Taiwan University of Science and Technology. **Email:** hua@mail.ntust.edu.tw
- **Master Co-Advisor : Chao-Lung Yang**, Associate Professor, Vice Director of Industry 4.0 Center National Taiwan University of Science and Technology. **Email:** clyang@mail.ntust.edu.tw