



# Albert Alfrianta

Fresh Graduated

Focus on Artificial Intelligence

LinkedIn albert-alfrianta

Kaggle albertbrucelee

Github albertbrucelee



## SUMMARY

Albert focuses on Artificial Intelligence (AI) field. Previously he is an Android programmer. But after he graduated he focus on AI because it's still rare in his country. He wants to contribute to his lovely country, and he aspires to make an AI Startup! So now he is sharpening his skills while looking for AI job.



## EDUCATIONS

### Bachelor's degree in Computer Science

Institut Pertanian Bogor (IPB)

2016 - 2019

Bachelor Thesis Topic: Development of Obstacle Avoidance Algorithms in Particle Swarm Optimization Algorithms for Target Search Multi-Robot System

How the system work: Robots is locate in a search area. Then the robots move to search for a targets. With Particle Swarm Optimization, robots is sharing their best location related to possible target location, so robots can find the best possible target location. In this simulation, I used 5 robots, and 1 targets. Robots use obstacle avoidance so they don't collide with each other and don't collide with obstacles. The system is simulate in Matlab.

*Technologies: PSO, Obstacle Avoidance, E-puck, Robot, Matlab*

### Diploma in Computer Engineering

Institut Pertanian Bogor (IPB)

2013 - 2016

Diploma Thesis Topic: School Administration Services Infrastructure Integrated with fingerprint device. I create the fingerprint device from Arduino microcontroller and fingerprint sensor ZFM208SA. The school administration services consists of website for manage the fingerprint, student payment website, school library website, and teacher presention website.

*Technologies: Arduino Microcontroller, Adafruit Fingerprint Sensor, MVC, Slim Framework, Codeigniter Framework*



## EXPERIENCES

### Android Developer

PT. TrendSolusindo, Bogor, Indonesia

November 2017 - August 2018

Projects:

- Develop RumahHokie android application from scratch: prototype and UI design using Marvel App and the android application using MVP architecture. Also build the API from scratch using Slim Framework. This application is available on Google Play Store
- Develop previous Roti Unyil ERP web based application: bread production, stock management and Point of Sales (POS)

*Technologies: MVP, MVC, Slim Framework, Codeigniter Framework, MySQL, OAuth 2.0, Marvel App*

### Java Programmer (Freelancer)

PT Virtua Internasional Pratama, Bogor, Indonesia

August 2016 - December 2016

Develop a blind watermarking application to insert a copyright license on vector maps for Badan Informasi Geospasial (BIG)

View the online version CV: <https://albertbrucelee.github.io/cv>

Technologies: J2SE, GeoTools

## Computer Engineer (Intern)

SMAN 1 Cibungbulang, Bogor, Indonesia

February 2016 - May 2016

Develop library administration services infrastructure (digital library website) integrated with fingerprint device. Modify existing fingerprint devices (Solution Fingerprint), so it can communicate with the websites using SOAP messaging protocol.

Technologies: SOAP, MVC, Slim Framework, Codeigniter Framework, MySql

## PROJECTS

### Development of Obstacle Avoidance Algorithms in Niching Particle Swarm Optimization Algorithms for Multi-Target Search Multi-Robot System

May 2019 - Present

This is my friend thesis. I help her to implement the algorithm.

How the system work: Robots is locate in a search area. Then the robots move to search for a targets. With Niching Particle Swarm Optimization, robots is sharing their best location related to possible target location, so robots can find the best possible target location. In this simulation, we used 40 robots, and 4 targets. Robots use obstacle avoidance so they don't collide with each other and don't collide with obstacles.

The system is simulate in Webots Simulator using C language. I use Matlab just only use to learn about the Niching Particle Swarm Optimization because it's easy to write the code in Matlab and easy to visualize the result.

Technologies: Niching PSO, Obstacle Avoidance, E-puck Robot, Webots Simulator, C, Matlab

### AntChat Android Application

Mar 2015 – Apr 2015

Application that connecting college students and assist in the dissemination of lecture information. This application won the Android Application Competition at Diploma IPB IT FEST 2015

## COURSES

### Machine Learning - Digital Talent Scholarship 2019 by Kemkominfo

July 2019 - August 2019

Training:

- Deep Learning: ANN, Supervised Learning (CNN, RNN), Unsupervised Learning (RBM, Autoencoders), Tensorflow
- Machine Learning: Regression, Classification, Clustering, Recommender System
- AWS Cloud Practitioner

My deep learning project: <https://www.kaggle.com/albertbrucelee/fashion-mnist-94-accuracy-using-cnn-keras>

## Skills

### Machine Learning & Deep Learning

Knowledge: Supervised Learning, Unsupervised Learning

Languages: Python, R

Libraries: Scikit-learn, Tensorflow, Keras

Tools and Others: Git, Jupyter Notebook / Google Colab

### Other

Knowledge: Swarm Intelligence, Android Development

Languages: Matlab, C++, SQL, Arduino, Java, PHP

Tools and Others: Linux, Webots Simulator, E-puck Robots, OpenCV, Postman