Albert Alfrianta

Fresh Graduated
Focus on Artificial Intelligence

LinkedIn albert-alfrianta
Kaggle albertbrucelee
Github albertbrucelee

SUMMARY

Previously Albert is an Android programmer. Recently, Artificial Intelligence (AI) is just starting to develop in Indonesia and still rare. So Albert now focuses on AI because he wants to contribute to the development of AI in his beloved country. Also, his dream is to develop Agriculture in Indonesia with AI technology because nowadays many people don't like to work in Agriculture field so it's starting to be abandoned.

EDUCATIONS

Bachelor's degree in Computer Science

Institut Pertanian Bogor (IPB)
2016 - 2019

Undergraduate Thesis: 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: 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 presension website.

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

EXPERIENCES

Swarm Intelligence & E-puck Robot Programmer (Freelancer)

May 2019 - Present

I help my friend to implement the algorithm in her thesis.

Thesis: Development of Obstacle Avoidance Algorithms in Niching Particle Swarm Optimization Algorithms for Multi-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 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

Matlab Programmer (Freelancer)

2016 - 2018

I help my lecturer, Maria Susan Anggreainy, to implement the algorithm in her dissertation. The algorithm write and visualized in Matlab.

Dissertation: Development of STR-DNA Similarity Measurement Based on Fuzzy logic Involving Family Relationships and Tribal Information.

Publications:

- Weighting for DNA Profiling
- Tribal Classification Using Probability Density Function (PDF) and Fuzzy Inference System (FIS)
- Gaussian Fuzzy Number for STR-DNA Similarity Calculation Involving Familial and Tribal Relationships
- Family Relation and STR-DNA Matching Using Fuzzy Inference

Technologies: Matlab, Bioinformatics, Information Theory

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)

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

CONTESTS

Android Application Competition

Diploma IPB IT FEST 2015
Mar 2015 – Apr 2015

Android application name: AntChat

Application that connecting college students and assist in the dissemination of lecture information. This application won the 1st place.

🚀 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

Machine Learning - coursera.org
Ongoing

Training: Logistic Regression, Artificial Neural Network, Machine Learning (ML) Algorithms

👥 ORGANIZATIONS

Forum Mahasiswa Kristen Diploma IPB
2013 - 2016

Details:
- Assistance in Religion Subject. I with my partner teach a religion subjects to new Christian college students in a group of 12 people.
- Event organizer member in some Christian events. Also as a guitarist in some Christian events.

Previously I had never joined an organization, and was not interested. Thank God and my friends who encourage me to join this organization, so now I know about organization and loved it.

♥ VOLUNTEERS

Sunday School Teacher's Assistant
2019 - Now

Sunday School is a Sunday Worship (Ibadah Minggu) for children. Children are the future of the nation, so I dedicate myself to serve them.

🔧 Skills

Machine Learning & Deep Learning
Knowledge: Supervised Learning, Unsupervised Learning
Languages: Python, R
Libraries: Scikit-learn, Tensorflow, Keras
Tools and Others: Jupyter Notebook / Google Colab

Other
Knowledge: Swarm Intelligence, Arduino Microcontroller, Android Development
Languages: Matlab, C++, SQL, Java, PHP
Tools and Others: Git, Linux, Webots Simulator, E-puck Robots, OpenCV, Postman