Albert Alfrianta

Fresh Graduated

Focus on Artificial Intelligence

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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. He have experience working on projects with a different title that he had no experience before. Therefore, he is agile to adapt to new knowledge, and he believes with hard work he will be able to master AI field. Last but not least, 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 developed and simulated using 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. The database created using MySql.

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 also 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.

The result is save into csv document (e.g. robot location at each iteration). I also use Python to analyse this result.

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

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

Maria Susan Anggreainy contact: +62 813-1417-6234 - susan.anggreainy@gmail.com

Technologies: Matlab, Bioinformatics, Information Theory

Android Developer and Web Developer

PT. TrendSolusindo, Bogor, Indonesia
November 2017 - August 2018

Projects:

- Develop RumahHokie android application using MVP architecture. Developed using Android Studio. This application is available on Google Play Store
- Develop RumahHokie REST API using Slim Framework. Authorization using OAuth 2.0
- Develop RumahHokie mobile application prototype and UI Design. Developed using Marvel APP
- Develop previous Roti Unyil ERP web based application: bread production, stock management and Point of Sales (POS). The web application is build using CI Framework (MVC architecture). The database use MySql

Technologies: MVP, Android Studio, REST API, Slim Framework, OAuth 2.0, Marvel App, MVC, Codeigniter Framework, MySql

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 and Deep Learning - Digital Talent Scholarship 2019

Ministry of Communication and Information Technology of the Republic of Indonesia

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

Ongoing

Training: Logistic Regression, Artificial Neural Network, Machine Learning Algorithms

ORGANIZATIONS

Christian College Student Forum (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 college student events. Also as a guitarist in some Christian college student 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

Christian Sunday School Teacher's Assistant

2019 - Now

Christian 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

Artificial Intelligence

Knowledge: *Machine Learning, Deep Learning*

Languages: *Python, R, Matlab, Octave*

Libraries: *Scikit-learn, Tensorflow, Keras, OpenCV*

Tools and Others: *Jupyter Notebook, Google Colab*

Robotics & IoT

Knowledge: *Swarm Intelligence*

Languages: *C, C++*

Tools and Others: *Webots Simulator, Arduino Microcontroller, e-puck Robot*

Others

Knowledge: *Android Development, REST API*
Languages: *Matlab, Octave, C, C++, SQL, Java, PHP*
Libraries & Framework: *Slim Framework*
Tools and Others: *Git, Linux, Android Studio, Postman*