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Nur Rohman Widiyanto

Summary

A lifelong learner who has a big passion for information technologies. I have excellent technical skills and an academic background in engineering (software and computer network), statistics, and machine learning. I also have experience as a Lead Network Engineer at a startup company previously. Specializing in software development, artificial intelligence, distributed system, cloud and grid computing. With a can do attitude, I ready to accepts new challenge, try to adapt quickly, and strive to give real impact to the organization.

Basic Information

Gender	Male
Date of Birth	26 th March 1991
Place of Birth	Lamongan
Marital Status	Single
Nationality	Indonesia
Languages	Indonesian (Native), English (Fluent).

Professional Experience

- July 2019 – July 2019 **Assistant Trainer**, *Digital Talent Scholarship 2019 FGA (Fresh Graduate Academy)*, Institut Teknologi Sepuluh Nopember & Ministry of Communication and Information Technology, Surabaya.
Assisted the main trainer to deliver courses about the basics of Python for Artificial Intelligence in AI class and MongoDB databases in IoT class.
- Nov 2018 – Nov 2018 **Assistant Trainer**, *Digital Talent Scholarship 2018*, Institut Teknologi Sepuluh Nopember & Ministry of Communication and Information Technology, Surabaya.
Assisted the main trainer to deliver courses about NLP (Natural Language Processing).
- Sept 2017 – Mar 2019 **Research Assistant**, *Telematics Laboratory (B. 201)*, Institut Teknologi Sepuluh Nopember, Surabaya.
Helped the lecturers to research program and teaching activity, handled network operations and servers in the laboratory.
- Sept 2014 – Aug 2016 **Lead Network Engineer**, *PT. Niltava Teknologi Indonesia*, Surabaya.
Handled network operations, internet connection troubleshooting, backend program operation and deployment on cloud servers (AWS EC2), setup of local testing server with KVM. Jujucharm from Ubuntu was used to deploy backend program in multiple servers.
- Jan 2013 – Feb 2013 **Student Internship**, *PT. Equinix Business Solution*, Jakarta.
Created software to monitor and control the network with C socket programming as back-end process and web-based interface.
- Feb 2012 – Mar 2013 **Assistant Coordinator**, *B. 201 (Telematics Laboratory) and other Computer Engineering and Telematics Laboratories*, Institut Teknologi Sepuluh Nopember, Surabaya.
Manage and coordinate research activity from laboratory assistant members or development groups, laboratory events or training, and laboratory sustainability (Housekeeping, server and internet connection maintenance).

Sept 2011 – **Laboratory Assistant**, *B. 201 (Telematics Laboratory) and other Computer Engineering and Telematics Laboratories*, Institut Teknologi Sepuluh Nopember, Surabaya.
Sept 2015
Became laboratory assistant member (Basic Programming and Digital Circuit), conduct research, held events (training and exhibition), housekeeping and maintain laboratory equipment and sustainability (Servers, Tools, and Internet Connection).

Education

Feb 2017 – **Master of Engineering**, *Institut Teknologi Sepuluh Nopember*, Surabaya, GPA: 3.91/4.00.
Sep 2020 **Department of Electrical Engineering**, with **Multimedia Intelligent Network** Study Program.
Aug 2009 – **Bachelor of Engineering**, *Institut Teknologi Sepuluh Nopember*, Surabaya, GPA: 3.11/4.00.
Sep 2015 **Department of Electrical Engineering**, focused in **Computer Engineering and Telematics**.

Bachelor's Degree Final Project

Title *Virtual Machine Performance Measurement on Cloud Computing*
Supervisors 1 Mochamad Hariadi, ST., M.Sc., Ph.D.
Supervisors 2 Christyowidiasmoro, ST., MT.
Description Built cloud servers to provide virtual machine (VM) as main services or IaaS with OpenStack. The VM was measured with benchmark programs to obtain the data about its performance metrics relative to its platform specifications (CPU, RAM and storage).

Master's Degree Final Project

Title *The Calculation of Player's and Non-Player Character's Gameplay Attribute Growth in Role-Playing Game with k-NN and Naive Bayes*.
Supervisors 1 Prof. Dr. Ir. Mauridhi Hery Purnomo, M.Eng.
Supervisors 2 Dr. Supeno Mardi Susiki Nugroho, ST., MT.
Description Created program to generate the RPG player character or enemies game attributes based on *k*-NN and Naive Bayes algorithm then the result was classified with Neural Network Multi-class Classification. This project was created using Python programming language.

Computer Skills

Languages C/C++, Python, JavaScript, NodeJs, Bash Shell Scripting.
Artificial Intelligence K-NN (Nearest Neighbor), Bayesian Method, Cluster Analysis, Regression Analysis, Classification Analysis, Decision Tree, Genetic Algorithm, Neural Network, Deep Learning.
Databases MySQL, MongoDB, Redis.
OS Debian, Ubuntu, CentOS, FreeBSD, OSX, Windows.
Network and Linux Operations Cisco and Huawei Hardware (Router and Switch) Operation, Mikrotik Router, Linux Network Operations (Gateway and Other Servers), Linux Commands Shell, Cloud Computing, OpenStack Cloud Framework, Virtualization (VirtualBox, KVM, and VMware).
Office Tools L^AT_EX, LibreOffice, Ms. Word, Ms. Excel, Ms. Power Point.
Simulator Matlab, CircuitMaker, Cisco Packet Tracer, Huawei eNSP.
Misc. HTML, CSS, Bootstrap Framework, Git, Open Computer Vision Library (OpenCV), Computer Hardware, Computer Performance Benchmarking, Software Development Life Cycle (SDLC), Agile Project Management.

Achievements

May 2012 **1st Place on ITS Hacking Competition 2012**, *Institut Teknologi Sepuluh Nopember*, Surabaya.
This competition purposed to got the vulnerability of the one of servers in ITS.

- April 2013 **2nd Place on GKPKM (Gelar Karya Program Kreatifitas Mahasiswa) ITS EXPO 2013**, *Institut Teknologi Sepuluh Nopember*, Surabaya.
This competition was similar or preparation for national science fair but at internal university level.
- Sept 2013 **Finalist on PIMNAS (Pekan Ilmiah Mahasiswa Nasional) XXVI**, *Research, Technology and Education Ministry*, Mataram University, Mataram.
This competition was Indonesian national science fair for undergraduate university student.

Certification

- Nov 2014 **Huawei Certified Network Associate (HCNA)**, *Huawei Technologies Co. Ltd.*, PUSTIKNAS (National ICT Center), South Tangerang.
Credential ID: 010200100495806019171617
- Sept 2020 **Agile Crash Course: Agile Project Management; Agile Delivery**, *Udemy*, Online.
Credential ID: UC-855d2519-7f1a-4a4f-9019-6dac452ab59b

Publications

- IEEE **F. Tsabita, W. N. Rohman, Rosmaliati, B. P. V. Lystianingrum and M. H. Purnomo**, “*Semi-Supervised Learning Optimization Based on Generative Models to Identify Type Of Electric Load at Low Voltage*”, 2018 International Seminar on Intelligent Technology and Its Applications (ISITIA), Bali, Indonesia, 2018.
pp. 209-214. doi: 10.1109/ISITIA.2018.8711235
- IEEE **N. R. Widiyanto, S., Nugroho, S. M. S., and M. H. Purnomo**, “*The Calculation of Player’s and Non-Player Character’s Gameplay Attribute Growth in Role-Playing Game with K-NN and Naive Bayes*”, 2020 International Conference on Computer Engineering, Network, and Intelligent Multimedia (CENIM), Surabaya, Indonesia, 2020.
pp. 103-110, doi: 10.1109/CENIM51130.2020.9297945

Related Projects

- Redis Benchmark** Benchmark Redis loads with random content using Node.js and bash scripting to measure memory requirement and database down behavior.
- Deblurring Image** An assignment from Genetic Algorithm class in Masters degree, about deblurring an image with genetic algorithm implementation. This project was created used MATLAB. (URL Link: github.com/rohwid/deblurring-image-genetic-algorithm).
- Stereo Camera Color Tracking** Created a program to detect an object with specific colors using HSV filter and built a DIY stereo camera from two ordinary webcams. The program will show the measurement result or distance from the camera to the object after the calibration process to setup the cameras to be used as stereo camera. This project was created used C++ with the OpenCV library. (URL Link: github.com/rohwid/multi-object-color-tracking-stereo).
- EMG identification with K-NN and Naive Bayes** Created a program to identify the EMG (Electromyography) as a biometrical feature from the human. The program read and classify the datasets from human EMG and the name as the label. When it’s given an input about human EMG data, the program will be classified who has the EMG data as a result. The EMG data from people that became an input came from the same people in the datasets, it separated about 70% for training and 30% for testing. This project was created used MATLAB. (URL Link: github.com/rohwid/emg-classification).
- Auto Nvidia Cuda Driver** A script to install NVIDIA drivers, CUDA, CUDNN and NCCL automatically in Linux to make deployment process more faster before do the deep learning training process with GPU. (URL Link: github.com/rohwid/auto-nvidia-cuda-driver).
- Emotion Recognition** Create the emotion detection model with VGG16. The goal was to detect 7 emotions (neutral, happy, sad, surprise, angry, fear and disgusted) but in this project only 5 emotion (neutral, happy, sad, surprise, and angry) which stable enough when detect the people emotions. (URL Link: github.com/rohwid/emotion-recognition).