



Koko Joni

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● WORK EXPERIENCE

01/02/2001 – 08/03/2002 – Surabaya, Indonesia
INTERTANIONAL TELEPHONE OPERATOR – PT. INDOSAT

connecting people who want call their colleage from Indonesia to other countries

03/01/2005 – 15/03/2005 – Surabaya, Indonesia
HELP DESK – KAESER COMPRESSOR

To help client for troubleshooting

02/01/2005 – CURRENT – Bangkalan, Indonesia
ELECTRICA ENGINEERING LECTURER – TRUNOJOYO UNIVERSITY

to teaching, conducting research and community service

● EDUCATION AND TRAINING

05/08/1998 – 16/08/2004 – Keputih, Surabaya, Surabaya, Indonesia
BACHELOR DEGREE – Sepuluh November Institute of Technology Surabaya

01/09/2010 – 26/07/2012 – Bulaksumur, Caturtunggal, Kec. Depok, Kabupaten Sleman, Daerah Istimewa Yogyakarta, Yogyakarta, Indonesia
MASTER DEGREE – Gadjah Mada University

● LANGUAGE SKILLS

Mother tongue(s): JAVANESE | INDONESIA

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B2	B1	B1	B1	B1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● DIGITAL SKILLS

Microsoft Office | Zoom | Google Drive | Social Media | Google Docs | Skype | Instagram | Facebook | LinkedIn | Good listener and communicator | Organizational and planning skills | Team-work oriented | Reliability | Internet user | Gmail | Responsibility | Flexibility | Analytical skills

● PUBLICATIONS

Design of solar power plants with hybrid systems

2020

The design of hybrid power plants aims to provide alternative solutions to the community in the event of a power outage. This solar power generation system utilizes solar panels that have the function of converting sunlight energy into direct electrical energy which is used as the main source in battery charging. In a hybrid solar power plant system that is made equipped with a logger system that stores data about temperature, current, voltage on the solar panel, battery percentage, output power at the load, charging source and the power used at the load. From the results of the design and testing of the hybrid charging system, the main power source of the solar panel, if the battery power is less than 40%, the charging system moves to PLN (the state electricity company) and when the battery power is above 50%, the charging from the PLN will be turned off, at Auto Transfer Switch (ATS) system will be active if the power from the PLN goes out, the relay will move the PLN power to battery power for 3 seconds due to the start of the inverter, if the PLN power is on, the power from the inverter will move to PLN directly with no pause.

Misty Image Repair System with Dark Channel Prior and CLAHE

2019

The aim of this study is to remove the influence of weather factors in order to improve the visual effects of the image and provide benefit to post-processing. Images captured in hazy or foggy weather conditions can be seriously degraded by scattering of atmospheric particles, which reduces the contrast, changes the color, and makes the object features difficult to identify by human vision and by some outdoor computer vision systems. Therefore image dehazing is an important issue and has been widely researched in the field of computer vision. Image haze removal based on dark channel prior can perform very well. But it didn't deal with sky region and brightness objects because dark channel prior is not established in these regions. To solve the problem and enhance the contrast, this paper propose to restored the hazy image by adding the contrast limited adaptive histogram equalization. With the contrast limited adaptive histogram equalization method, the results of the dark channel prior results can be contrasted so that the image becomes clearer and more specific. Experimental results showed that such method is MSE 0.256 is equal to PSNR of 54,043 With this research, it is expected that a clean image after processing can provide maximum information to humans.

Design Of Modified Microstrip Antenna And 4x1 Microstrip Array For Data Communication At 2.4 GHz Frequency

2018

— *The use of wireless or wireless communication technology is currently growing very rapidly. To conduct wireless communication, an antenna is needed because it functions to send and receive electromagnetic waves / signals in the process of data transmission. This research has been designed, simulated, fabricated, parameter testing and distance testing for data communication at 2.4 GHz frequency. The initial stage of antenna design is determining the antenna dimensions based on antenna formulas and then simulating with the CST Studio Suite. Fabricated Microstrip antennas as senders are able to work well in the 2.4 GHz frequency with return loss = -12.06 dB, VSWR = 1.692, impedance = 38.35Ω ohms. While the 4x1 fabricated microstrip array antenna is also able to work well at 2.4 GHz frequency with return loss = -19.41 dB, VSWR = 1.235, impedance = 54.77 ohms. That is, the two microstrip antennas are suitable for use at 2.4 GHz frequency and in accordance with the expected specifications. While the fabricated yagi antenna works on multiband frequencies (many frequencies). The test using module Xbee PRO S2C and Xbee S2C*

Analysis of Artificial Intelligence Application Using Back Propagation Neural Network and Fuzzy Logic Controller on Wall-Following Autonomous Mobile Robot

2017

this paper presents a comparison of two methods of artificial intelligence which applied in Wall-following Autonomous Mobile Robot; both of them are Neural Network Backpropagation and Fuzzy Logic. The robot has three input variables and two output variables. The inputs are distance between the robot and the wall which is sensed by HC-SR04 ultrasonic sensors. The output variables are the speed of the two wheels which is driving by 12 Volt DC motor. In this case mobile robot is designed to avoid the collision with any obstacles like wall or other mobile robots. In this implementation mobile robot is designed with a numbers of ultrasonic sensors and placed on certain position like center front, left front and left back. The sensor will send the data in real time. After being processed, the input produces output in form of speed value governing motor rotation mounted on both wheels of the robot to find the optimum point. In this comparison, both methods Backpropagation Neural Network and Fuzzy Logic are treated the same. Wall-following Autonomous Mobile Robot is using Atmega2560 microcontroller. The logic is uploaded to the microcontroller. The result of the comparison of these two methods when applied in Wall-following Autonomous Mobile Robot is the movement of the robot using Neural Network Backpropagation is faster than using Fuzzy Logic Controller

2017

Trash is one of serious problems in Indonesia. It leads to another problems which deal with social, culture and economic, most of cities in Indonesia have some problems in managing the trash. It is because the government doesn't have the standard of trash management. The schedule to take the trash usually discover a problems with a lateness. The lack of trash management and people's habit who don't care about the trash impact effect to more serious problems that deal with the trash. Such as, environmental problems. Based on the problems the researcher makes a system called "Smart Garbage Based On *Internet of things*". The system applies the technology of temporary garbage used internal system. This system creates in order to fix the problem of punctuality. Which makes the trash management more effective and efficient. The process of uploading the information in the internal awareness of based on the "real time" activity this system can increase the purity and health. Because the trash is controlled and not accumulated around people. The ultrasonic sensor and nodeMCU are used as a module of IoT to discover the temporary garbage. Graphical user Interface desktop and android are also used in order to observe the level of trash in temporary garbage. The notification system can be access in mobile and desktop interface. Furthermore the temporary garbage location can find by using google map the result of research shows that the system is running well. The system can online 12 hours/day along 2 weeks in experiment. The data sent by online based on "real time" activity and the result of mapping and tracking on android show the location of garbage.

Design of Automatic Voltage Regulators on Ac 1 Phase Generators Using PID Control (Proportional Integral Derivative)

2017

Tegangan yang tidak stabil dapat merusak perangkat elektronik. Hal tersebut banyak dirasakan oleh masyarakat kepulauan Madura yang belum tersentuh jaringan listrik PLN (Perusahaan Listrik Negara). Sehingga untuk memenuhi kebutuhan listrik, masyarakat kepulauan menggunakan generator AC 1 fasa tanpa Automatic Voltage Regulator (AVR). Hal ini dikarenakan harga AVR yang relatif mahal. Oleh karena itu dalam penelitian ini penulis menghadirkan teknologi AVR terbaru yang lebih murah dan lebih handal dari AVR sebelumnya. Hal tersebut dapat diwujudkan dengan penggunaan mikrokontroler Atmega 8 sebagai komponen utamanya. Rangkaian AVR berfungsi untuk mengatur besarnya tegangan dan arus yang masuk ke lilitan medan pada generator. Dengan memanfaatkan umpan balik dari sensor pembagi tegangan yang masuk ke mikrokontroler Atmega 8, maka dapat digunakan kendali PID (Proportional-Integral-Derivative) pada sistem. Agar tegangan output generator tetap stabil sesuai dengan setpoint yang diinginkan, maka tegangan dan arus yang masuk ke lilitan medan akan dikurangi atau ditambah menggunakan metode pulse width modulation (PWM) sesuai dengan besarnya perhitungan galat yang diperoleh dari hasil perhitungan kontroler PID. Hasil dari penelitian ini ialah AVR dapat diintegrasikan dengan generator AC 1 fasa serta tegangan output dan frekuensinya akan stabil apabila $K_p = 70$, $K_i = 35$ dan $K_d = 9$.