





YAYASAN PERGURUAN CIKINI
INSTITUT SAINS DAN TEKNOLOGI NASIONAL

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SURAT PENUGASAN TENAGA PENDIDIK

Nomor : 018/03.1-Gm/SP-Ganjil/IX/2023

SEMESTER **GANJIL**, TAHUN AKADEMIK 2023 / 2024

N a m a	: Dr.,Ing. H. Agus Sofwan, M.Eng.Sc.	Status Pegawai	: Dosen Tetap			
NIK	: 01.86501	Program Studi Magister	: Magister Teknik Elektro			
Jabatan Akademik	: Lektor					
Bidang	Perincian Kegiatan	Tempat	Jam / Minggu	Kredit (sks)	Keterangan	
I PENDIDIKAN dan PENGAJARAN	1. MENGAJAR DI KELAS (KULIAH / RESPONSI DAN LABORATORIUM)					
	• Teknik Pemodelan dan Simulasi	S2 Reg		1,5	Kamis, 18.30 - 21.00	
	• Sistem Robotika (P)	S2 Reg		1	Sabtu, 08.00 - 09.30	
	• Etika Profesi	S1		1	Rabu, 13.00-14.40	
	• Sistem Proteksi	S1 Reg		1,5	Senin, 15.00-16.40	
	• Sistem Proteksi	S1 P2K		1,5	Rabu, 17.00-18.40	
	2. PEMBIMBING					
	• Skripsi / Tesis				1	
	3. PENGUJI					
• Skripsi / Tesis				1		
II PENELITIAN	1. Penelitian Ilmiah	S.2				
	2. Penulisan Karya Ilmiah			1		
	3. Penulisan Diktat Kuliah					
	4. Menerjemahkan Buku					
	5. Pengembangan Program Kuliah Kurikulum					
	6. Pengembangan Bahan Ajar					
III PENGABDIAN DAN MASYARAKAT	1. Menduduki Jabatan di Pemerintahan					
	2. Pengembangan Hasil Pendidikan & Penelitian untuk Pengabd masyarakat					
	3. Memberikan Penyuluhan/Pelatihan/Ceramah pada masyarakat				1	
	4. Memberikan Pelayanan Kepada Masyarakat				1	
	5. Menulis Karya Pengabdian Pada Masyarakat yang tidak dipublikasikan					
	6. Komersial / Kesepakatan					
IV UNSUR-UNSUR PENUNJANG	1. Jabatan Struktural			3		
	2. Menjadi anggota panitia / Badan pada suatu Perguruan Tinggi					
	3. Menjadi anggota Badan Lembaga Pemerintah					
	4. Menjadi Anggota Organisasi Profesi				1	
	5. Mewakili PT / Lembaga Pemerintah duduk dalam Panitia antar Lembaga					
	6. Menjadi Anggota Delegasi Nasional ke Parlemen – Parlemen Internasional					
	7. Berperan serta aktif dalam pertemuan ilmiah/Seminar					
	8. Anggota dalam Tim Penilai Jabatan Dosen					
Jumlah Total				15,5		
Kepada yang bersangkutan akan diberikan gaji / honorarium sesuai dengan peraturan penggajian yang berlaku di Institut Sains Dan Teknologi Nasional Penugasan ini berlaku dari tanggal 19 September 2023 sampai dengan 28 Februari 2024						
Jakarta, 19 September 2023 DEKAN  (Dr. Ir. H. Abdul Multi, MT)						
						

- Tembusan :
1. Ka. Biro Sumber Daya – ISTN
 2. Ka. Biro Akademik – ISTN
 3. Ka. Biro Keuangan – ISTN
 4. Pertinggal

IoT-based Temperature and Humidity Detector Prototype in the UHAMKA Data Center Room

M. Asep Rizkiawan, Harry Ramza, Agus Sofwan

Abstract

Internet of Things (IoT) is a concept where an object or entity is imbued with technology such as sensors and software, aiming to communicate, control, connect, and exchange data with other devices as long as they remain connected to the internet. In this research, the developed IoT is employed to monitor and control the conditions of a data center space. The research methodology follows the system development life cycle, utilizing the Blynk application and a modified Arduino Uno with the esp8266 microcontroller, relay, and DHT-22 sensor for real-time temperature and humidity detection. The IoT development's outcomes were tested through black box and white box approaches. The research results demonstrate that the IoT network prototype functions effectively, enhancing the performance of the data center space. Temperature measurements were acquired from the DHT22 sensor, and alternative temperature measurements were taken without utilizing the DHT22 sensor, instead using a tool known as a thermometer, revealing measurement errors. Based on the calculation of the average percentage of temperature error on the DHT22 sensor, it can be concluded that the temperature error rate reaches 0.051%, while for humidity it reaches 0.064%, with an average delay time of 6.542 ms. Additionally, users have convenient access through both a website and mobile platform for seamless monitoring.

Keywords

IoT; Smart Monitoring; Temperature and Humidity; Realtime

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